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ABSTRACT

Reporting of zero/low income by applicants for Basic Educational Opportunity Grants (BEOGs) was studied, with attention to the extent that such reporting was inaccurate. The BEOG applicant database was studied to gain understanding of the characteristics of those who report zero-income on Basic Grant applications. A random sample of 400,000 BEOG 1978-1979 applicants was analyzed. To determine the accuracy of 1976-1977 applicants' reporting of zero-income to BEOG, comparisons were made with 1976 tax data of the Internal Revenue Service (IRS). Discrepancies in adjusted gross income and eligibility indices that result from IRS data substitution were examined. Of particular concern was the accuracy of BEOG-reported data by dependency status, income level, and applicant category (all applicants, eligible applicants, and eligibles with farm or business assets). In addition, records for 9,005 applicants selected for validation during 1977-1978 were studied to identify additional characteristics of zero-income applicants, their accuracy, and the causes of misreporting. (SW)

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# ZERO INCOME BASIC GRANT APPLICANTS

Phase I Report

September 14, 1979

Prepared for:

Division of Quality Assurance
Bureau of Student Financial Assistance
U.S. Office of Education
Department of Health, Education and Welfare

Contract No. 300-75-0354

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September 14, 1979

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Reference: Zero Income Study, Phase I for Contract No. 300-76-0354 (AMS No. G-90)

Dear Ms. Cowan:

We are pleased to submit copies of the Zero Income Phase I Report. This report was prepared under the direction of Ms. JoAnn Kuchak, Project Director. We shall be pleased to respond to any questions you may have about this document.

Sincerely,

APPLIED MANAGEMENT SCIENCES, INC.

Todd S. Tucker

Todd S. Tucker, Ph.D.
President

TST/rcc
Enclosure

G-90

# ZERO INCOME BASIC GRANT APPLICANTS

## Phase 1 Report

This report was prepared pursuant to Contract No. 300-76-0354. The amount charged to the Department of Health, Education and Welfare for the work preceding and resulting in their report is $44,419. The names of the persons employed by the contractor with managerial or professional responsibility for such work are as follows.

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# EXECUTIVE SUMMARY

This report contains the findings from a series of studies of applicants reporting zero or minimum incomes to Basic Grants. The findings reflect 1) the 1977-78 BEOG applicant population, 2) the 1976-77 BEOG applicants and IRS records, and 3) the 1977-78 BEOG applicants selected by pre-established criteria for validation.

In summary, more than one-half of the applicants report an adjusted gross income (AGI) below $6000 to Basic Grants. Those reporting zero AGIs account for 23.7 percent of the applicants. However, a large proportion of these applicants report income from nontaxable sources. Those with zero AGI and zero nontaxable income account for only 4 percent of all applicants. It appears that applicants who fail to report income from any sources are experiencing general difficulties in completing the application, as evidenced by their propensity to fail to report household size.

The zero and low income groups differ significantly from the BEOG population as a whole in demographic as well as financial characteristics: twice as many dependents' parents are separated, widowed or divorced among the zero income applicants as in the whole BEOG population; all this group has smaller households and numbers enrolled in postsecondary education. The majority of zero-income applicants are independents.

The BEOG population and validation study data suggest that zero and low-income applicants have a greater degree of difficulty with application forms than other applicants, but these applicants do not report income data that are significantly more discrepant than others. The IRS-BEOG comparison study, by contrast, does show significant inaccuracies. However, the rate at which IRS records were obtained for these low income groups was much lower than average, and those that did match in this group are more likely than non-matches to be misreporting income, since legitimate zero and low income applicants may not file income tax returns.

The impact of misreporting income identified in the IRS study for low income groups took two forms. For a small number, significant misreporting took place, so as to result in ineligibility for some low-income applicants. For a larger group, the impact of misreporting of AGI was relatively small. The applicant data base findings suggest that most of the applicants reporting zero adjusted gross income are reporting financial resources other than AGI. The IRS study shows that small pockets of the zero-income applicants, however, are misreporting significantly. The only way this study sheds light on distinguishing true low income applicants from misreporters is that the legitimate applicants may have difficulty with the rest of the form (i.e., leaving other fields blank) whereas illegitimate reports of zero income may be more likely to occur on a properly completed application.

## REPORT SUMMARY

Three studies were conducted to determine the nature of and extent to which BEOG applicants report zero/low income on their applications, and the extent to which such reports are inaccurate. While Census data show that the number of families in the U.S. with no income is declining, the number of BEOG applicants reporting no income has risen since the program's inception. The Zero Income Studies began from this concern that the program was designed for the needy, but that to increase the size of a grant, an applicant may deliberately underreport income. Too, other types of errors may be evident in the process that cause unwarranted increases in the size of some grants, while perhaps decreasing grants for those that have genuine need.

The zero-income population deserves special study, since it seems implausible that a family could survive on no new income — and that in times of severe inflation and fairly low unemployment, the number of families that do so would be increasing. This unique characteristic enables analyses of the quality of the BEOG processing overall to concentrate on the extreme case, and to attempt to isolate factors that may lead to misreporting. Because of the implausibility of survival under such condition, the probability of misreportingb in some cases seems likely.

There are several groups of applicants that may be defined as having zero-income. Almost one-fourth of all BEOG applicants report having no Adjusted Gross Income (AGI). Some of these applicants may be supported by student financial aid, non-taxable income or Social Security and other income assistance programs. Still others may have no non-taxable income, but are supported by assets accumulated in previous years or by forms or businesses they own which have suffered losses, resulting in no income for the year. For the purposes of this report, applicants may be defined as having:

- Zero AGI, but some non-taxable income or other resources
- Zero total income (AGI + NTI) but other resources
- "Pure zero" income (zero total income but no other resources).

The Zero-Income Studies concentrated on several major issues:

1. What are the financial and demographic characteristics of zero/low income applicants, and how do they differ from other applicants?
2. What application correction patterns exist for zero/low income applicants, and how do they differ from other applicants?
3. What types of comments are received by zero/low income applicants and how do they differ from other applicants?
4. What are the subsequent behaviors of applicants rejected for inadequate income?
5. What is the impact of comments to income for zero/low income applicants? How does it differ, if at all, for applicants at other income levels?
6. What proportion of the zero/low income applicants/ families filed Federal Income Tax Returns? How does this compare with applicants/families at other income levels? How does this compare with the direct contact validation findings?
7. Based on the IRS data, what is the accuracy of adjusted gross income and taxes paid reported by zero/low income applicants? How does this compare with applicants at other income levels?
8. What is the impact of misreporting on the eligibility index for zero/low income applicants and how does this compare with the applicants at other income levels?
9. What is the response behavior in the validation processing of selected zero/low income applicants? How does this compare with applicants at other income levels?
10. What is the impact of validation on income and the eligibility index?
11. How did applicants who responded to validation substantiate zero/low income?

The three studies that investigated these questions did so from the perspectives of three different data sources. First, we looked at records of all BEOG applicants; secondly, the BEOG data and IRS records were compared, when there were matches between the BEOG and IRS files; finally, the BARC validation file was analyzed. The BEOG data were used primarily to address questions 1-5 above, while the IRS comparison study looked at questions 1 and 6-8. The validation data used to address questions 1 and 9-11.

These studies used segments of the BEOG applicant population. The BEOG file analyses used the 1978-79 BEOG applicant records as of December, 1978. The validation study used the 1977-78 BARC file which contained applications selected for validation by a series of pre-established criteria. The IRS data utilized a sample from the 1976-77 BEOG population in order to be able to match BEOG records with IRS data on file — 1976-77 income tax data first become available in 1978. The populations for each study may be described as follows.

1. BEOG Applicant Population Components

   - 3,552,166 regular applicants whose current status was:
     - 192,722 eligible applicants  
       54.1 percent
     - 1,126,037 ineligible applicants  
       31.7 percent
     - 504,408 rejected applicants  
       14.2 percent
   - 655,625 applicants whose adjusted gross income was zero, but who had nontaxable income and other resources  
     19.1 percent
   - 174,209 applicants whose total income (adjusted gross plus nontaxable) was zero  
     4.9 percent
   - 234,443 applicants whose adjusted gross income was greater than zero, but $3,000 or less for dependents, $1,500 or less for independents  
     6.6 percent

2. IRS Comparison Study Components

   - 3,228,487 Regular applicants whose current status was  
     2,142,620 Eligible applicants  
     66.4 percent  
     ...129,388 Eligible applicants with farms or business assets  
     0.4 percent

3. Validation Study Sample Components

- 9,005 applicants selected for validation
  - 4,867 applicants submitted correction or confirmation 54.0 percent
  - 208 did not use grants and were dropped from analysis 2.3 percent

The findings of each study are highlighted below.

## A. BEOG POPULATION ANALYSIS

1. The zero and low adjusted gross income (AGI) applicants to Basic Grants do differ from the population as a whole along characteristics that affect their financial status significantly. Zero-income dependent applicants are more than twice as likely to report a family type other than a two-parent household than all dependents. Less than one-fourth report two-parent households compared to 69.1 percent of all dependent applicants. Zero-income independents, too, are not likely to be married. Those with low incomes show similar trends, but not as marked as the zero-income applicants.

2. Zero income students account for over 80 percent of the cases of failure to report household size on their initial applications. More than one-fourth were rejected for inconsistent or missing information in this field, while only 1.3 percent of the BEOG population as a whole made this error.

3. Low income applicants were far less likely than zero-income and more likely than all applicants to be rejected, but more likely than zero-income and all applicants to become eligible. Many of the zero-income applicants were rejected for inadequate financial resources, and failure to report household size while the low income applicants were not.

4. While the zero/low-income applicants display large differences from the BEOG population as a whole, these differences are less pronounced for the low income group than for the zero-income group.

5. Sources of income for zero/low-income applicants were mostly attributable to non-taxable income and the combination of non-taxable income and Social Security educational benefits. Only 11.9 percent of the zero AGI applicants in fact, do not report any means of support, while only 18.7 percent of low-income applicants were solely dependent on their adjusted gross income.

6. Those applicants reporting non-taxable income as their only source of income other than AGI were most likely to become eligible with 93 percent of both zero and low income applicants who report NTI being eligible.

7. Those rejected for inadequate income are less likely to resubmit their applications (13 percent reapply) than the BEOG applicants as a whole (approximately one third reapply).

8. In the BEOG system, correction actions and behaviors have a balancing effect: although many applicants lose a claimed zero- or low-income status, the same number of applicants gain that status. The effect is to have the general proportion of zero- and low-income applicants remain the same.

9. Among those who were initially rejected for inadequate income and submitted changes to their applications, a small positive average AGI ($384) for eligibles was reported. Those who re-entered and became ineligible, however, reported AGI and NTI changes averaging over $9,000 in total, indicating a substantial amount of misreporting in the re-entered ineligible group. This group was however, quite small — 4,321 individuals. Overall 17.7 percent of the rejected for inadequate income applicants changed their AGIs; this averaged $4,009. For the 22.3 percent who changed NTI, the change averaged $2,865.

10. Those rejected for inadequate income who reported farm or business assets were more likely to reapply than others rejected for the same reason, and more likely to be rejected or declared ineligible on the basis of the re-submission. Although this group changed NTI less often, they had larger changes than all inadequate income applicants. They were much more likely to change AGI than all applicants, but those with farms had a lower average change, while those with businesses had a higher average change than other inadequate income applicants.

11. The BEOG application was more likely than the multiple data entry forms to result in a rejection for inadequate income, but those that use the BEOG form were more likely to be to zero-or low-income applicants.

## B. IRS - COMPARISON STUDY

1. IRS - BEOG matches were obtained for fewer than 50 percent of all dependent applicants reporting income of less than $6,000 per year. Match rates for independent applicants were generally higher than for dependents. Match rates were also higher for larger income levels than for zero and low income levels.

2. Eligible dependents with farm or business assets had higher match rates than any other group. Income was most frequently overreported by those with farm or business assets; this group was less likely than other eligibles to underreport to BEOG.

3. More than 40 percent of all applicants reporting negative income overreported their income to BEOG, and this group was least likely to be underreporting.

4. Matched applicants who report zero-income were the most likely group to underreport income. They tended to be the most discrepant of the different income groups in terms of the frequency and magnitude of Eligibility Index increases resulting from the substitution of IRS for BEOG data. Applicants reporting incomes under $3,000 also exhibited large EI changes more frequently. However, these groups had the lowest match rates of any income levels, and it seems likely that those that did match had the highest concentration of zero and low income applicants who were misreporting since many of these applicants without income would have had no need to file a tax return to IRS.

5. Ninety-nine percent of all applications for which BEOG assumed the value of AGI based on other data available were inaccurate. The discrepancies from this procedure were quite large in comparison to other applicant groups.

## C. VALIDATION STUDY

1. Zero and low-income applicants had smaller household size and fewer enrollees from the household enrolled in post-secondary education.

2. Those with incomes of $1,000 or less were most likely to confirm fields rather than submit corrections, or to fail to respond to the validation request. As income increases, changes were made to AGI more frequently than to NTI.

3. Among respondents to the validation, the vast majority tended to make corrections rather than simply reply confirming the information they originally supplied on their SERs. Those with household sizes of 1-4 were more likely to confirm all fields than were those with larger household size; they were also more likely to submit acceptable responses.

4. The changes made as a result of validation request varied by the type of corrections made. The average absolute change to Eligibility Index for the validation respondents as a whole was 437 points, and the average effective EI changes was 237 points. One-fifth of those with EI changes became ineligible.

5. The largest EI change occurred for applicants in the $1-$3,000 range (335 points). The average effective EI change for zero- and negative income applicants by contrast was 111 points.

6. The \$1-\$3,000 income group was most likely to change the level of AGI initially reported. The zero or less income group, by contrast, was likeliest to change NTI, but much less likely to change AGI than other income groups.

7. Very few applicants became ineligible as a result of making changes to NTI if they did not also correct AGI, while 28.3 percent of those who changed AGI became ineligible.

8. Increases of more than 50 points to the SEI occurred for 32 percent of respondents to the validation process. The proportion of such changes increased for incomes over \$6,000.

9. The negative, zero and \$3,000-\$6,000 income range consistently had the least numbers and smallest changes to AGI, SEI and NTI of any income groups.

10. The AGI discrepancies caused the distribution of applicants in the income categories used for analysis to change considerably, especially for those in the \$1-\$3,000 category, many of whom increased their AGI to \$6,000 or more. The zero/negative income group was most likely to remain the same.

11. An analysis of sources of income for a small sample (304) of validation respondents gave some clues to sources of income for zero-AGI applicants. Those with no AGI or NTI reported accounted for almost three fourths of the sample. These individuals were most likely to report income from financial aid, farming or business assets, support from a spouse if separated, divorced or widowed, or report being incarcerated. Those with some NTI are most frequently receiving assistance form Social Services, Public Welfare or Veteran's educational benefits. Government-sponsored support accounted for 31.9 percent of the cases and 10.9 percent reported receiving financial aid.

# 1

# INTRODUCTION

The intent of the Basic Grant Program is to promote equality of educational opportunity by removing financial barriers to post-secondary education. In the total scheme of Federal financial aid, the Basic Grant is the core, with other sources of Federal and non-Federal aid completing the package. Therefore, the largest group of BEOG recipients are at the lowest end of the income scale. Traditionally, more than half of the BEOG eligibles have had incomes below $6,000. A substantial portion of the low income group is comprised of applicants and families who report no taxable income. A subset of this subgroup is the smaller group which reports no taxable income and no nontaxable income.

Conversations with a representative of the U.S. Census Bureau revealed that in 1977, only 120,000 families nationwide reported having no income (data not yet published). In July 1978, the Census Bureau published the following statistics about families and individuals:

TABLE 1: INCOME DISTRIBUTION BY FAMILIES AND UNRELATED INDIVIDUALS[1/]

| Total Money Income | Number of Families And Unrelated Individuals* | Families* | Unrelated Individuals* |
|---|---|---|---|
| Under $1,000 | 1,747,000<br>2.2% | 566,000<br>1.0% | 1,181,000<br>5.5% |
| Under $2,000 | 3,774,000<br>4.8% | 1,107,000<br>2.0% | 2,667,000<br>12.4% |
| Under $3,000 | 8,025,000<br>10.3% | 2,193,000<br>3.9% | 5,832,000<br>27.2% |

*Percents are cumulative

These data are not exactly consistent with BEOG definitions. The BEOG application requests adjusted gross income and non-taxable income; the Census data tabulates "total income" from earned income sources such as wages, salaries and unemployment, plus non-earned income from sources including dividends and interest, royalties, pensions, welfare and unemployment, social security, etc. Further, although similar, the Census definition of "family" requires a legal relationship at the time of data collection while the BEOG definition for dependent status does not. More importantly, the Census data reflects all families and individuals and is not restricted to those with household members enrolled in postsecondary educational institutions. However, in broad terms, it is likely that a relatively small proportion of people nationwide have no or very low incomes.

Although the Basic Grant program is targeted for the low income applicant, and it is reasonable to expect the BEOG applicants to be comprised of a larger percentage of low income applicants than the total population, it does not appear that an individual or a family can be surviving on no income. Through the validation process conducted by Applied Management Sciences, contacts with applicants have revealed that many fail to report income from nontaxable sources because they believe that nontaxable income does not need to be reported on the application. There are also legitimate reasons that an applicant may have no income; for example, incarcerated persons or wards of the state legitimately have no income. Some independent students are supported solely by financial aid. Other situations exist where an applicant may be receiving room and board from a beneficiary and is receiving no additional income. However, the proportion of zero-income applicants in the BEOG population has grown since the beginning of the program. (As of September 25, 1978, 26.13 percent of the applicants reported adjusted gross incomes as blank or under $1,000.) Given the recent annual rates of inflation and the Census data, the growing number of zero income applicants in the BEOG applicant population raises the question of the extent to which the zero incomes are accurate and the extent to which income has not been reported properly.

The purpose of this study is to establish the extent to which the zero income applicants may represent a problem in terms of misreported income and to alert BEOG management to the possible problem. Therefore, the major thrusts of this study will be to develop profiles of the zero income applicants, to identify the extent to which these applicants may be misreporting income, and to uncover possible reasons for misreporting, and possible means of controlling abuse.

The analysis was conducted from three perspectives. The BEOG applicant data base was studied to obtain an understanding of the characteristics of those who report zero-income to Basic Grants on their applications. The accuracy of the reporting of zero-income to BEOG was the focus of the second perspective. For this analysis, comparison of BEOG-reported income with the tax data of the Internal Revenue Service was undertaken. Finally, the records collected during the BEOG application validation process were studied to identify additional characteristics of zero-income applicants, their accuracy and the causes of misreporting.

Chapter 2 which follows describes the methodology for this study. Chapters 3 through 5 present the key findings of the analysis.

## END NOTES

1/ Money Income in 1976 of Families and Persons in the United States. Current Population Reports, Series P-60, No. 114, July, 1978, p. 41.

# 2

## METHODOLOGY

The Zero-Income Applicants Study utilized three separate data bases: the BEOG applicant population, the data base of matched BEOG-IRS records, and the sample of applicants whose applications were validated as part of BEOG processing quality control procedures. The specific methodology for each analysis is discussed in each chapter. There were, however, several overriding procdures, definitions and issues that cut across the three sub-studies in this report. In general, averages, frequencies and percentages were the main analysis techniques. The independent variables were the applicant characteristics of income level, family type and size and other key attributes such as the changes to EI that validation, corrections or the substitution of IRS data for that on the BEOG record would make. The dependent variables for analyses were those which related to the types of support applicants reported. The combinations of sources and amounts of support contributed to definitions of zero and low income applicants for the purposes of analysis. The definition of zero and low income applicants for this study was based on the following income variables throughout:

- absence or low amount of adjusted gross income
- absence or low amount of total income (adjusted gross income plus non-taxable income)
- absence of adjusted gross income in concert with various amounts or the presences/absences of the following variables:
  - non-taxable income
  - Veteran's educational benefits
  - Social Security educational benefits.

- presence of business or farm assets that may imply losses that effect a lower adjusted gross income.

The specific variables and BEOG processing terms that are employed in this report are listed in Table 2.1.

For the IRS comparison and BEOG Applicant File analysis, a typology of zero- and low-income applicant characteristics was defined from the above variables. With AGI held constant, either at a zero-level or in he range of AGI levels of $1-$3,000 for dependents and $1-$1,500 for independents, the sources of income were varied. The resulting typologies were compared with one another. The typologies are listed below:

| Typology | Characteristics |
|---|---|
| 1 | AGI, Portions, NTI, SSA, VEB all zero or blank |
| 2 | AGI, NTI, VEB, SSA zero or blank; <br>Portions present |
| 3 | AGI, Portions, NTI, SSA zero or blank; <br>NTI present |
| 4 | AGI, Portions, NTI, VEB zero or blank; <br>SSA present |
| 5 | AGI, Portions, NTI, SSA zero or blank; <br>VEB present |
| 6 | AGI, Portions, VEB zero or blank; <br>NTI and SSA present |
| 7 | AGI, Portions, SSA zero or blank; <br>VEB and NTI present |
| 8 | AGI, Portions zero or blanks; <br>SSA, VEB, and NTI present |
| 9 | AGI zero or blank; <br>Portions, NTI, SSA, and VEB present. |

Somewhat different typologies were defined for the validation file because data concerning sources of income were not directly available from the BARC Validation Data Base used for that analysis. These typologies were based on the presence/absence of non-taxable income and household size, with AGI at the zero level. Hard copy data from the

## EXHIBIT 2.1: VARIABLES USED IN THE ZERO INCOME ANALYSIS

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Income Measures:

Adjusted Gross Income (AGI) Used both as categorized and as a continuous variable. May be negative; equivalent to taxable income on IRS 1040 form.

Nontaxable Income (NTI) Other kinds of income: public assistance and unemployment compensation; proceeds from tax-exempt bonds; pensions and social security; others. Cannot be negative.

Total Income (TI) AGI plus NTI. In general, blank ("no answer") only if both AGI and NTI are blank.

"Pure-zero" income Zero AGI, no other sources of income reported.

"Minimum AGI" Low income (see below).

Low-Income Applicants AGI = $1-$3,000, inclusive for dependents, $1-$1,500 for independents.

Regular Applicant Used to eliminate all supplemental applications (who estimate income) from the study. Therefore, this study includes only applicants who reported actual income from a prior year.

Other Resources:

Veterns Benefits (VEB) Educational benefits only. Applicable to only a small portion of the cases.

Social Security (SSA) Educational benefits only.

Applicant's Resources Savings of dependent students.

Income-Related Measures:

Portions That share of AGI, before deduction of offsets to income, contributed by the earned income of individual wage earners.

Net Assets Includes value of owner-occupied residences, savings, investments.

Farm Assets Indicates value of farm (partial or whole ownership).

Business Assets Same as for farm assets.

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EXHIBIT 2.1: (Continued)

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Eligibility Index (EI) Outcome of the BEOG eligibility test; roughly equivalent to a judgment as to expected family contribution to the cost of education as far as the Basic Grant system is concerned.

Other Key Eligibility Criteria:

Household Size (HS) Number of members of applicant/family household.

Dependency Status Whether applicant is self-supporting or not according to BEOG rules and conventions (which effectively require three years' emancipation).

Persons in Higher Education (PHE) Measure of total number of household members enrolled. Additional enrollees qualify applicant for offset.

Unusual Expenses Unreimbursed medical or casualty costs. Qualifies applicant for offset.

Unreimbursed Tuition Costs of maintaining household members in private elementary, junior and senior high schools. Qualifies applicant for offset.

Rejected Application is missing key data, without which eligibility cannot be calculated, on data are inconsistent.

Eligible Calculation of eligibility yields Student Eligibility Index (SEI) of 1200 points or less. The higher the point total, the smaller the grant.

Ineligible Calculation of eligibility yields SEI of more than 1200 points.

Additional Variables:

Transaction Identifies whether case reflects initial application, subsequent, or final (current) corrections.

Application Source Type of form submitted: ACT, BEOG, CSS, or PHEAA.

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EXHIBIT 2.1: (Continued)

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Low Income Typologies A categorization of income sources to yield specific types of low- or zero-income applicnts, e.g., those with zero AGI, nontaxable income only, etc. Source of the "pure zero" (and, in combination with the "low income applicant" screen mentioned above) the "minimum AGI" typologies used in the report.

Application History Compares the characteristic over a student's record of subsequent contacts with the system to show if the case has always met this condition, if it originally met it but has now changed, or if it was originally not meeting the condition byt does at present.

Maritial Status For dependent applicants, the marital status of the parents or guardians. For independent applicants, their own maritial status.

Institutional Control Whether expected postsecondary institution will be public, private (and not proprietary), or proprietary.

Corrections Behavior Specific types of possible conditions -- such as if AGI was changed, and if so by how much -- for measuring the extent to which statements are altered after rejection on subsequent reapplication to BEOG.

Special Comments Identifies if a case met a particular condition in editing leading to specific programmed comments (such as a request for verification or more infomation) on reject messages.

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validation records were available and also analyzed by typological profiles to obtain information on sources of income reported by the validation applicants.

Specific issues related to each analysis are discussed in the appropriate chapter.

# 3

## ANALYSIS OF ZERO INCOME BASIC GRANT APPLICANTS USING 1978-79 BASIC GRANT APPLICATION FILE

### 3.1: INTRODUCTION

Over half of the applicants for and subsequent recipients of Basic Grants reported no taxable income on their Basic Grant application. About 8 percent of all applicants claimed to have neither taxable nor non-taxable income. Of these latter applicants, half reported that they had no resources whatever or no non-taxable income, no earned dollars before taxes, and no educational support from either Social Security or Veterans benefits. The distribution of low and zero income students is shown below:

DISTRIBUTION OF LOW INCOME APPLICANTS BY TYPE OF LOW INCOME

| Total Income Categories | All Applicants<br>% of Column | Eligible Applicants<br>% of Column |
|---|---|---|
| $6,000 | 59.3 | 46.5 |
| $6,000 | 40.5 | 52.7 |
| Of these:[1] | | |
| $1-$6,000 | 23.8 | 47.1 |
| Zero or Blank Total Income (TI) (AGI & NTI) | 7.8 | 3.4 |
| Zero or Blank AGI | 19.1 | 27.6 |
| Zero or Blank AGI, but NTI present | 14.9 | 24.1 |
| Pure zero = Zero TI, no other resources, does not include negative income | 4.1 | 2.2 |
| | N = 3432594 | N = 1884541 |

[1] Involve duplicate counting, categories not mutually exclusive.

The proportion of individuals reporting no income whatsoever is problematic to the BEOG program because, since it is difficult to imagine how such individuals survive without funds, it is probable that many of the zero income cases represent misreporting. Even persons in penal institutions are likely to have small allowances for personal cash purchases. There are some circumstances that can lead to zero income situations that are accurately reported. Some independent students are supported entirely by financial aid, none of which is considered "income" for BEOG application purposes. Or families may have financial setbacks such as large debts. Where zero income is, in fact, inaccurate, it may be caused by deliberate misreporting or a lack of understanding of some portions of the application. One possible misunderstanding is that applicants do not realize that welfare checks or unemployment compensation payments are a form of non-taxable income and fail to report them. Many individuals who report zero incomes and are rejected by BEOG processing edits, change their income estimates on corrected applications.

The purpose of studying the low and zero income groups in the 1978-79 applicant population is to learn about the extent of possible misreporting of income, to discover how well Basic Grant systems work to identify and correct erroneous reports, and to describe in detail other characteristics and behaviors of the low/zero income applicants. As is frequently the case in financial assistance programs, this examination will reflect tensions inherent in the BEOG program itself, between the objective of providing needy students with the assistance to which they are entitled and the need to ensure that the Grants are equitably distributed on the basis of accurate reporting by the applicant of the extent of the resources available for their education. This part of the Zero Income Studies addresses the following specific questions:

- Do other characteristics of zero income applicants, such as their family status, also set them apart from the general group of people seeking Basic Grants?
- What happens when applicants are rejected for reasons of inadequate income documentation? Is there evidence that misunderstanding and misreporting is detected and corrected? That legitimate zero/low income cases are documented, accepted, and processed?

- Are low/zero income applications, or particular kinds of outcomes related to those applications, likely to be associated with the use of particular BEOG application sources (ACT, the College Scholarship Service, etc.), or with applications to particular kinds of schools (e.g., public two-year colleges, proprietary institutions, etc.)?
- In general, is there evidence that zero income applications are especially prone to abuse or other problems of the Basic Grant program? If so, what ought to be done about it?

Data pertaining to these questions were compiled from the 1978-79 BEOG application data base. The remainder of this section of the report presents the results of these analyses. Section 3.2 describes the methodology of the report, derivation of statistics and definitions of terms. Section 3.3 presents the results of analysis of applicants who report "pure zero" income, those who report a complete lack of resources for financing postsecondary education. Section 3.4 discusses characteristics of applicants with very low incomes, between $1 and $3,000 for dependent applicants and between $1 and $1,500 for independent applicants. Section 3.5 discusses the possible sources of income for low/zero income applicants that may/may not have been reported to Basic Grants as resources available to help finance postsecondary education. The impact of corrections and changes applicants make to their Student Eligibility Reports (SERs) are considered in Section 3.6.

## 3.2: METHODOLOGICAL CONSIDERATIONS

The analysis of the low/zero income cases in the Basic Grant applicant pool utilized the data base of all 1978-79 BEOG applicants as of December, 1978. The data included all transactions made on each record. For the analysis in this section, the Student Eligibility Report that determined final disposition of the applicant's eligibility (SER of record) was the primary source of information. Where the changes and corrections made to those records are of interest, the analyses of certain records will be reported, and labelled as such.

When using the Basic Grant file for analysis, several caveats should be noted. As applications are processed they pass through several editing and other checks.on specific information items. If an application fails such checks, it is rejected, and the applicant must resubmit it with corrections if he/she wishes to be reconsidered. Therefore, applications may follow any of several routes of contact with the Basic Grant system. Comparison of an applicant's statements as one moves through the system provides valuable information as to the efficacy of these processes in eliciting corrections and verifications of income statements.

Another feature is that applicants may use one of four different application forms and their ability to report accurately may also be affected by different procedures in place at postsecondary schools for students desirous of financial aid. In assessing the data obtained from applications subjected to such variations, there may be some uncertainty as to whether differences should be ascribed to characteristics of the applicants using a particular type of form or process, or to the features of the forms or processes themselves.

Too, "income" is a composite of many types of resources, each of which can be reviewed in detail or in combination with others. Thus, the possible explanations of low/zero income reporting and misreporting are many. Conclusions presented are, therefore, tentative and take these caveats into consideration.

The total number of cases in the Basic Grant applicant file as of 1978-79 was about 3,552,000. A random sample of 400,000 was selected from this population to minimize data processing expenses. A subset of these cases have met specific criteria which selected them for validation. Because it was evident that selection for validation may alter reporting behaviors after the validation began, corrections behaviors after selection for validation were ignored. It was important to include these cases in the sample because the validation selection criteria include low income applicants who received particular application processing system edits. In order to maximize the generalizability of the study, therefore, these cases were included in the analysis.

## 3.3: "PURE ZERO" APPLICANTS

The pool of BEOG applicants includes a group of individuals who report a complete lack of resources that would be considered in the calculation of BEOG eligibility to be available for financing a postsecondary education. These applicants have shown a lack of earned income, as well as zero adjusted gross income, nontaxable income, Veteran's benefits and Social Security benefits, and are termed 'pure zero" applicants. The wage earners in these households may have been unemployed, or the applicant, if independent, may have been supported entirely by financial aid. The Federal College Work-Study program, for example, is considered a form of financial aid rather than earned income for the purposes of BEOG eligibility. Also, it is possible that individuals work yet have no earned income: a parent may have established a small business with zero earnings for the year; a writer may have had no sales; other self-employed individuals could have erratic cash flows that result in a total lack of earned income for the year. These individuals may be living off past savings or borrowed money.

Such cases are rare, but they may comprise a measurable segment of the BEOG population.

As shown in the Table 3.1 below, dependent and independent applicants with pure zero income are rejected, reapply and become eligible at the same rates. There are more independent "pure zero" income students than dependents. Once rejected, these applicants were required to correct or confirm the reported income or they are dropped from consideration for a grant. Small numbers of dependent applicants do resubmit and are declared eligible. Eligible, dependent, "pure zero" income cases may have had student assets or student income (which does not have to be reported to Basic Grants), explaining how they survivied without the parents' earning income. A similar result might also have occurred if family assets consisted of such capital as stocks and bonds on which the owner suffered a net loss for the fiscal year, but negative income cases were excluded from the "pure zero" class, although they may account for some of the other low-income applicant outcomes.

### TABLE 3.1: DISPOSITION OF "PURE ZERO" APPLICANTS BY DEPENDENCY STATUS

| | TOTAL | | CURRENTLY REJECTED | | ACCEPTED | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Eligible | | Ineligible | |
| Dependency Status | % of Column | Number | % of Row | Number | % of Row | Number | % of Row | Number |
| Dependents | 40.4 | 51,173 | 33.8 | 17,296 | 62.3 | 31,881 | 3.9 | 1,996 |
| Independents | 59.6 | 123,036 | 32.6 | 40,111 | 64.9 | 79,850 | 2.5 | 3.076 |

When we compare "pure zero" cases with all BEOG applicants, we find that there are distinct differences in the family structure reported to BEOG, as shown in Table 3.2. Among dependent "pure zero" applicants fewer than one-fourth of the individuals come from two-parent households, compared to nearly 70 percent of all Basic Grant applicants. This suggests that some "pure zero" cases may be explained by failure to consider support money from an estranged marriage partner as part of the family's resources.

Table 3.2: FAMILY TYPE OF "PURE ZERO" INCOME APPLICANTS CONTRASTED WITH ALL BEOG APPLICANTS

| Family Type | "Pure Zero" Applicants % of Column | All BEOG Applicants % of Column |
|---|---|---|
| Dependents N = 51,173 | | |
| Of these, percent: | | |
| Two-parent household | 22.6 | 69.1 |
| Single parent or other households | 77.4 | 30.9 |
| Independents N = 123.036 | | |
| Of these, percent: | | |
| Single | 61.1 | 43.8 |
| Married | 8.6 | 29.2 |
| Divorced/Widowed/ Separated | 30.3 | 27.0 |

The characteristics of "pure zero" applicants suggest that this group is atypical of the entire BEOG applicant population as shown in Table 3.3. Whereas the average household size for all applicants was 4, for eligible "pure zero" applicants household size averaged 1.4 while for all "pure zero" applicants the average was 2.3. Since most "pure zero" eligibles are independent applicants the low household size was expected. It may be that many "pure zero" applicants come from single parent homes, accounting for the low level of household size for all pure zero applicants. The average number of students in the family enrolled in postsecondary education was also lower for eligible "pure zero" than for all "pure zero", and lower for all "pure zero" than for all BEOG applicants. Pure zero cases were more likely to be seeking attendance at public institutions of higher education. Eligibles were likelier to seek a four-year course of study than other courses. The "pure zero" group as a whole sought two-year program more frequently than all BEOG applicants and sought four year programs less frequently. "Pure zero" cases were

TABLE 3.3: CHARACTERISTICS OF APPLICANTS ON VARIABLES OTHER THAN INCOME

| Characteristics | Pure Zero Applicants Eligibles | Pure Zero Applicants All | All BEOG Applicants |
|---|---|---|---|
| Average Household Size | 1.4 | 2.3 | 4.0 |
| Average Number of Persons Enrolled in Postsecondary Education | 1.1 | 1.1 | 1.4 |
| Percent of applicants with | | | |
| farm assets | 0.3% | 0.5% | 2.2% |
| business assets | 0.3% | 0.5% | 2.7% |
| Anticipated Institution: | | | |
| Percent of applicants seeking to attend: | | | |
| Public | 76.2% | 71.7% | 64.5% |
| Private, Non-profit | 18.0% | 19.6% | 27.1% |
| Proprietary | 5.8% | 8.7% | 8.4% |
| Percent of applicants seeking to attend: | | | |
| Two-Year | 26.3% | 30.0% | 23.0% |
| Four-Year | 54.6% | 41.4% | 56.5% |
| Other | 17.6% | 27.1% | 18.7% |
| Unknown | 1.6% | 1.5% | 1.8% |

less likely than the entire BEOG population to report farm or business assets; while 2.2 percent and 2.7, respectively, of all BEOG applicants reported such assets, only one half of one percent of the "pure zero" cases do so.

The "pure zero" cases, which accounted for only 4 percent of all BEOG applicants included over 80 percent of applicants who failed to report household size. This would indicate that "pure zero" applicants may have had some difficulty understanding the application form or processing of their Grant, causing them to be rejected. Table 3.4 below illustrates the differences in reporting between the "pure zero" group and all BEOG applicants. The data indicate that income criteria may not have played as an important a role in the failure of "pure zero" applicants to achieve eligibility for Basic grants as expected. Rather, reporting difficulties for at least a third contributed to this factor. Over 70 percent of the "pure zero" cases were rejected, with one third of those rejected failing to supply such important information as household size.

TABLE 3.4: DISPOSITION OF APPLICATIONS FOR BASIC GRANTS, as a percentage of:

| Disposition | "Pure-Zero" Cases % of Column | All BEOG Applicants % of Column |
|---|---|---|
| Rejected for Household Size and Net Assets | 25.5 | 1.3 |
| All Other Rejections | 45.3 | 12.9 |
| Accepted, Not Eligible | 0.3 | 31.7 |
| Accepted, Eligible | 28.9 | 54.1 |
| N = | 174,209 | 3,552,166 |

## 3.4: "MINIMUM AGI" APPLICANTS

Low income BEOG applicants differ from the "pure zero" cases only by a matter of degree. As such, it is a group that is of interest to study because its members do not have adequate resources to finance their education, and, indeed, minimal resources for survival. Those cases reporting taxable incomes (AGI) of \$1-\$3,000 for dependent applicants and \$1-\$1,500 for independent applicants have been defined as low income applicants for this analysis. Some of these applicants failed to report "portions" of earned income before offsets were calculated, but did enter a figure for AGI; some reported both. Over 18 percent of this group had earned incomes before adjustments of more than \$3,000. The reduced levels of AGI may be the result of adjustments for major offsets to income such as business or other capital losses. Others may be subject to erratic annual incomes.

From the standpoint of eligibility for a grant, there is not much difference between minimum-AGI applicants and zero-income applicants. Living allowances and other parameters built into the eligibility calculation will entitle both types of applicants to generous Federal support, unless substantial taxable assets are availabe. The minimum-AGI group comprised nearly 7 percent of all the applicants, as shown in the Table 3.5 below. As would be expected, they are similar to the "pure zero" category in that once an application is accepted for processing, the applicant is quite likely to be eligible for a grant. The overall rejection rate for minimum-AGI applicants is smaller than the "pure zero" income cases, but compared to all Basic Grant applicants, it is still quite high. The reasons for rejection of these applications are similar to those for "pure zero" cases, most likely involving the absence of key data items or incongruent data.

TABLE 3.5: COMPARISON OF DISPOSITION OF CASES FOR ZERO/LOW INCOME AND ALL BEOG APPLICANTS

| | "Pure Zero" Applicants % of Column | Minimum AGI Applicants % of Column | All BEOG Applicants % of Column |
|---|---|---|---|
| Currently rejected | 70.8 | 41.7 | 14.2 |
| Accepted, Ineligible | 0.3 | 0.5 | 31.7 |
| Accepted, Eligible | 28.9 | 57.7 | 54.1 |
| | N = 174,209 | N = 234,443 | N = 3,552,166 |

The family status of applicants is similar in patterns to the "pure zero" applicants, but the degree of differences between minimum-AGI and all BEOG applicants is smaller than those exhibited by "pure zero" cases. The characteristics of the minimum-AGI applicants generally fall mid-way between those of the "pure zero" group and those of all Basic Grant applicants. Most eligible minimum AGI applicants were independent, but this group had a larger proportion of dependent students than did the "pure zero" group as shown in Table 3.6. The ratio of low income dependent applicants from conventional, two-parent households is about the same as that in the general BEOG applicant population. "Pure zero" cases, however, had a much higher incidence of other types of families. The same trend is evident among independent low income eligibles: there are significantly more single minimum AGI applicants than in the population as a whole, but not as many proportionately as in the "pure zero" groups.

TABLE 3.6: COMPARISON OF FAMILY TYPE FOR ELIGIBLE APPLICANTS

| Eligible Applicants | "Pure Zero" Applicants % of Column | Minimum AGI Applicants % of Column | All BEOG Applicants % of Column |
|---|---|---|---|
| Dependents -- two-parent household | 4.0 | 18.1 | 35.6 |
| Dependents -- single-parent or other household type | 22.1 | 14.3 | 27.1 |
| Independents -- single | 43.7 | 47.9 | 16.9 |
| Independents -- married | 6.1 | 4.3 | 9.4 |
| Independents -- divorced, widowed, separated | 21.7 | 15.5 | 11.0 |
| TOTAL | N = 111,731 | N = 234,443 | N = 3,552,166 |

Household sizes for low income applicants fall between those for all BEOG cases and the "pure zero" income group as is shown in Table 3.7.

TABLE 3.7: COMPARISONS OF SELECTED ADDITIONAL CHARACTERISTICS FOR ALL APPLICANTS

| APPLICANT CHARACTERISTICS | Pure Zero Cases | Minimum AGI Cases | All BEOG Applicants |
|---|---|---|---|
| Average Household Size: | 2.33 | 2.79 | 3.95 |
| No Data, Household Size: | 25.5% | 1.0% | 1.3% |
| Average Eligibility Index: | 20.7 | 34.5 | 1471.1[1] |
| Anticipated Institution: | | | |
| Public | 73.3% | 69.5% | 64.5% |
| Private | 18.7 | 22.6 | 27.1 |
| Proprietary | 8.0 | 7.8 | 8.4 |
| Two-year | 30.0% | 25.6% | 23.0% |
| Four-year | 41.4 | 51.3 | 56.5 |
| Other | 27.1 | 21.3 | 18.7 |
| Unknown | 1.5 | 1.9 | 1.8 |
| Percent with: | | | |
| Farm Assets | 0.3% | 2.2% | 2.2% |
| Business Assets | 0.3% | 1.7% | 2.7% |

[1] Includes ineligibles.

However, the low income cases are similar to the overall population in that they do not, on the whole, fail to submit such basic data as the household size item.

Indeed, the difference in rejection rates between the "pure zero" and minimum-AGI groups is apparently attributable to a large degree to problems in accurately reporting all types of information on the SER. The difference in rejection rates between "pure-zero" and minimum AGI cases approximates the frequency of non-reporting of household size by the zero income group, indicating that the zero-income reported may be caused by a failure to understand the requirements of the application.

Other characteristics also fall midway between the "pure zero" and all applicants. The low income cases are more likely to apply to public, two-year schools (but not as likely to do so as the zero-income cases). The eligibility indices for the groups are quite similar; as noted earlier, one would expect both to exhibit similar ability to make an educational contribution.

## 3.5: COMPARISON OF SOURCES OF INCOME FOR LOW INCOME APPLICANTS FOR ZERO-AGI AND MINIMUM AGI APPLICANTS

"Pure zero" income applicants are a subset of all zero-AGI applicants. Many individuals with zero-AGI have sources of support other than earned income; indeed, many have earned incomes, but, when adjusted for various offsets, losses and expenses, their adjusted gross income is equal to zero, or becomes negative. Sources of income other than AGI for both zero-AGI and minimum AGI cases are the subject of this section. The sources of income that we will examine in this section include: non-taxable income, Social Security benefits, Veterans' Educational benefits and "portions" reported by applicants. (Portions are the amount of earned income reported by applicants.)

The analysis of zero and low income families utilized nine typologies, each defined by a constant AGI and a combination of other resources. For zero-AGI cases, that constant was zero; for low income AGI cases, the income was defined as between $1-$3,000 for dependent applicants and $1-$1,500 for independents, inclusive. Approximately 21.7 percent of the applicants can be defined as low income, while another 22.5 percent had zero-AGIs. As shown in Table 3.8, the numbers of individuals in each category are small. Yet, each possesses some unique qualities that distinguish them from the BEOG population as a whole, as described in the paragraphs that follow.

A smaller proportion of the zero AGI category reported no non-taxable sources of income than did the low income group. This would be expected, since the low income applicants have at least minimum funds from earnings, while the "pure zero" would have none. As we have discussed before, the "pure zero" condition is somewhat implausible since it is difficult to survive without resources.

## Table 3.8: DISTRIBUTION OF ZERO AND LOW INCOME APPLICANTS BY SOURCE OF INCOME

| | All Zero AGI Applicants | | All low-income Applicants | |
|---|---|---|---|---|
| | # | % | # | % |
| Total | 773,472 | 100.0 | 743,518 | 100.0 |
| Earned Income Only | 134,030 | 17.3 | 93,810 | 12.6 |
| Non-Taxable Income Only | 374,532 | 48.4 | 366,823 | 49.3 |
| Social Security Only | 4,385 | 0.5 | 7,008 | 0.9 |
| Veterans' Educational Benefits Only | 8,566 | 1.1 | 11,158 | 1.5 |
| NTI and SSA | 97,078 | 12.6 | 91,603 | 12.3 |
| NTI and VEB | 14,878 | 1.9 | 14,401 | 1.9 |
| NTI and SSA and VEB | 13,647 | 1.8 | 12,625 | 1.7 |
| NTI and SSA and VEB and Earned Income | 34,668 | 4.5 | 6,693 | 0.9 |
| "Pure Zero" | 91,688 | 11.9 | | |
| Minimum AGI only | | | 139,397 | 18.7 |
| All BEOG Applicants | 3,432,594 | | | |

The dependency status of zero income applicants varies considerably for each category of applicant, primarily as a function of the type of aid. For example, Social Security for college-age recipients will most often be for dependents as support to widowed families. On the other hand, veterans are more likely to be independent. Table 3.9 displays the distribution of dependency status among zero and low income applicants. For the most part, earned income before adjustments and non-taxable income, when considered alone, show a fairly even distribution between dependents and independent applicants. When SSA funds are received, the applicant is likelier to be dependent, while the large majority of persons with Veteran's benefits are independent. Except for those applicants reporting Social Security benefits, the distribution of this zero and low income cases by dependency status was not consistent with the BEOG population as a whole. However, the zero and low income groups were consistent with one another, differing only by a few percentage points. The largest differences for any category of financial resources other than AGI occurred when all sources of income other than AGI were reported; here 74.6 percent of zero-AGI cases were dependent contrasted with 69.7 percent of the low income. Where no sources of income (other than AGI for the low income group) were considered, the differences between the groups was dramatic--only 19.3 percent of zero income cases were dependent, as opposed to 40.4 percent of low income cases.

## 3.6: REJECTION RATES FOR ZERO/LOW INCOME APPLICANTS

Table 3.10 contrasts current rejection rates among various types of zero/low income applicants. Except where applicants reported earned income before adjustments, the current rejection for zero and low income groups was approximately the same. If NTI was reported by the applicants they were usually less likely than the BEOG applicant population as a whole to be rejected, while all others were more likely to be rejected. The overall rate of current rejection is 14.2 percent. Those reporting Social Security benefits as their only source of income other than AGI have the highest rate of current rejection; those who reported Veteran's benefits only ranked second highest in current rejections. Reporting earned income had less effect on the rejection rate of zero-AGI applicants at 37.5 percent but higher for the low-AGI group at a 91.2 percent rate of current

TABLE 3.10: DISPOSITION OF APPLICATIONS FOR ZERO/LOW INCOME APPLICANTS

| | Disposition by Row Percents | | |
|---|---|---|---|
| | | | Accepted |
| Zero-AGI Applicants | Rejected | Eligible | Ineligible |
| Total | 16.2 | 80.3 | 3.5 |
| Earned Income Only | 37.5 | 62.1 | 0.4 |
| Non-taxable Income Only | 4.3 | 92.9 | 2.8 |
| Social Security Only | 56.2 | 43.3 | 0.4 |
| Veterans' Educational Benefits Only | 42.9 | 56.6 | 0.5 |
| NTI and SSA | 3.6 | 90.0 | 6.4 |
| NTI and VEB | 5.2 | 76.4 | 18.4 |
| NTI and SSA and VEB | 4.2 | 81.4 | 14.4 |
| NTI and SSA and VEB and Earned Income | 1.5 | 74.6 | 23.9 |
| "Pure Zero" | 48.0 | 51.3 | 0.7 |
| Minimum AGI Applicants | | | |
| Total | 2.6 | 67.5 | 29.9 |
| Earned Income Only | 91.2 | 8.6 | 0.1 |
| Non-taxable Income Only | 4.3 | 93.0 | 2.7 |
| Social Security Only | 80.4 | 19.3 | 0.3 |
| Veterans' Educational Benefits Only | 59.2 | 40.8 | - |
| NTI and SSA | 3.8 | 90.8 | 5.4 |
| NTI and VEB | 4.7 | 76.9 | 18.4 |
| NTI and SSA and VEB | 4.5 | 82.6 | 12.9 |
| NTI and SSA and VEB and Earned Income | 78.3 | 19.3 | 2.5 |
| Minimum AGI Only | 70.8 | 28.8 | 0.4 |
| All BEOG Applicants | 14.2 | 54.1 | 31.7 |

rejection. For the low income cases the combination of all sources other than AGI also resulted in a high rate of rejection (78.3 percent). Social Security payments for the low income group meant an 80.4 rate of rejection. If only AGI were reported, the zero AGI applicants were rejected 48.9 percent of the time, while low-AGI applicants were rejected 70.8 percent of the time.

The largest rate of eligibility was experienced by those with NTI as the only source of income; the lowest were for applicants with SSA as the only source of income other than AGI. Applicants with SSA or VEB only were likelier to become eligible if they had zero AGI than if they had a low AGI.

## 3.7: EFFECTS OF CORRECTIONS AND REAPPLICATIONS ON ZERO INCOME APPLICANT STATUS

One important study question in the BEOG system analyses is the efficacy of the application review process in eliciting corrections to data provided by applicants that are inconsistent or that meet certain criteria that indicate that they may be inaccurately reported. This section of the report presents information obtained through analysis of the corrections behavior of zero income applicants. The BEOG processing system has in place a series of [illegible], and quality control checks for the screening applications. Of the more than 3.5 million applicants in the 1978-79 BEOG population, approximately 1.6 million were returned to the applicant with an income-related comment. Of these, 174,209 were rejected because they reported "inadequate income". The processing system initially rejects all applicants reporting zero or negative incomes. In order to be considered further, these applicants are required to either verify their statments or to provide new information on reapplication. Over 90 percent of "inadequate income" rejections occurred on the applicant's initial transaction with the system. Many of the remaining 10 percent were rejected for "inadequate income" more than once.

rejection. For the low income cases the combination of all sources other than AGI also resulted in a high rate of rejection (78.3 percent). Social Security payments for the low income group meant an 80.4 rate of rejection. If only AGI were reported, the zero AGI applicants were rejected 48.9 percent of the time, while low-AGI applicants were rejected 70.8 percent of the time.

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This section describes the characteristics of applicants whose applications are returned with comments. We will first examine the "rejected for inadequate income" in some detail since these are the zero income population that is the focus of this report. Subsequent parts of this section will discuss other comments received. Table 3.11 summarizes subsequent behaviors of applicants rejected for inadequate income. There is a remarkable consistency in reapplication behaviors of applicants.

TABLE 3.11: SUBSEQUENT ACTIONS OF THOSE REJECTED FOR INADEQUATE (ZERO) INCOME

| | | |
|---|---|---|
| Total Applications, 1978-79 | 3,552,166 | |
| Rejected, zero income | 174,209 | |
| percent rejected | | 4.9% |
| Of Those Rejected: | percent -- | |
| | never reentered | 26.5% |
| | reentered and rejected | 6.4 |
| | Subtotal | 33.0% |
| | reentered, eligible | 64.1% |
| | reentered, not eligible | 3.0 |

About one-third of the applicants submit corrections, regardless of status. Of those whose initial applications were rejected for inadequate income only 73 percent submit a second application, but those for whom a third or additional application is necessary, one third reapply as is true of other types of applicants. The disposition of cases is similar whether it is the first round of corrections, the third round or later. Repeated transactions do however result in a reduction in the proportions of rejected applications and an increase in the proportion of applicants who eventually become eligible for a Grant.

Corrections have a balancing effect in the BEOG system. While many applicants lose a claimed zero or low income status, the same number of other applicants gain that status. The net effect, then, is to leave the general proportion of these zero or low income applicants the same, although the specific individuals who make up these classes may change. The table below clearly shows these shifts for both of the groups ("pure zero" income and "minimum AGI" income) examined in detail below. The two categories, which are mutually exclusive, make up nearly 11 percent of the applicant population. This share is reduced to about 4 percent when those who could not sustain their zero or low income claims are eliminated in second transactions. However, nearly as many cases are added to these groups in subsequent transactions. As shown below in Table 3.12, over one-fourth of those rejected for inadequate income information never reapply. In some cases, the applicant may choose not to reapply because the original application was a misrepresentation. Others may reflect simple discouragement and unwillingness to try again. Still others may have a fundamental misunderstanding of the system and not realize that they do have the option of reapplying. For those who do re-enter the application process, seven out of eight are eventually declared eligible.

TABLE 3.12: EFFECTS OF MULTIPLE TRANSACTIONS AND OTHER CORRECTIONS BEHAVIOR

| | Percent "Pure Zero" Cases | Percent "Minimum AGI" Cases | Percent Both Types |
|---|---|---|---|
| Original share of applicant population | 4.0%[1] | 6.8%[1] | 10.8%[1] |
| LESS: those changing status in subsequent transactions | 2.5 | 4.4 | 6.9 |
| EQUALS: persistent/accepted zero/low income cases (may still be eligible) | 1.5 | 2.5 | 3.9 |
| PLUS: those acquiring status in subsequent transactions | 2.6 | 4.1 | 6.7 |
| EQUALS: current share of applicant population | 4.1 | 6.6 | 10.7 |

[1] Percent of total population

Table 3.13 provides some detailed characteristics of the applicants who were rejected for inadequate income. Those who never reentered report the lowest AGIs (the mean value for this group is negative). These applicants also have a negative average non-taxable income, indicating that they may have misunderstood the concept of non-taxable income since a negative NTI value is not possible given the definition of NTI (see Chapter 2).

As seen in the table, those initially rejected but eventually found eligible for a Grant show a small, positive AGI on the most recent transaction. They also have some non-taxable income. These resources may still be defined as minimal and insufficient for the student and his/her family to be able to make significant contributions for the cost of education. Indeed, the average SEI of this group is 89 points. On the other hand, those who reentered but became ineligible have substantial amounts of both AGI and NTI, adding to an average total income of more than $9,000. This group was, however, quite small (4,321 individuals). Those who reentered but still were considered rejected had larger AGIs than eligibles, but still substantially smaller than those of ineligibles. Reentered, rejected cases had lower non-taxable incomes on the average than the eligibles. They also have higher average household sizes and number of household members enrolled in postsecondary institutions.

Only 17.7 percent of those rejected for inadequate income changed their AGIs on subsequent applications, as shown in Table 3.14. These changes averaged $4,009. Some 22.3 percent of those rejected changed NTI on succeeding transactions, with an average value for these change of $2,865. Few applicants modified household size or number enrolled in post-high education.

There are some variations in these statistics when specified applicant subgroups are inspected. As has been noted earlier, independent students are much more likely to claim zero income status. Once such a claim is made, both independent and dependent students are likely to show about the same rates of eventual attainment of eligibility. There are noteworthy differences between independents and dependents, however, in the porportions of these groups which modify income statements (dependents are about twice as likely to do so) and in the size of the adjustments reported (dependent adjustments to both AGI and nontaxable income are larger) as may be seen in Table 3.15. Dependents rejected for "inadequate income" are also significantly less likely to be accepted for BEOG processing if they fail to modify income statements. All of these processing behaviors are consistent with the trends previously reported confirming that dependent applicants with zero income appear to be less accurate in their reporting of income than independent applicants.

Table 3.16 presents information concerning another group of applicants of special interest, those with farm or business assets. These individuals qualify for special treatment in the calculation of need. The presence of such assets may also be a way of explaining some kinds of zero income situations, as noted above. Those with farm assets are about as likely to be rejected for inadequate income statements as are all BEOG applicants, while those with business assets are somewhat

TABLE 3.13: SELECTED FINANCIAL AND HOUSEHOLD CHARACTERISTICS FOR THOSE WHO WERE REJECTED FOR INADEQUATE INCOME, MOST RECENT TRANSACTION

| | Never Reentered | Reentered Rejected | Reentered Eligible | Reentered Ineligible |
|---|---|---|---|---|
| Current Average Value: | | | | |
| Adjusted Gross Income | -$167 | $606 | $384 | $6,584 |
| Nontaxable Income | -$ 6 | $587 | $823 | $2,528 |
| Eligibility Index | N/A | N/A | 89.21 | 2,421.56 |
| Household Size | 2.65 | 3.10 | 2.72 | 2.86 |
| Number of Persons in Post High Education | 1.14 | 1.25 | 1.20 | 1.18 |
| Average Number of Transactions | 1 | 2.6 | 2.5 | 2.6 |
| | N = 41,826 | N = 33,200 | N = 79,071 | N = 4,321 |

TABLE 3.14: MAGNITUDE OF CHANGES IN SELECTED FINANCIAL AND HOUSEHOLD CHARACTERISTICS, FOR THOSE REJECTED FOR INADEQUATE INCOME

| | Percent with Change | Average Size of Change |
|---|---|---|
| Adjusted Gross Income | 17.67 | $4,009 |
| Non-taxable Income | 22.3 | $2,865 |
| Household Size | 5.7 | 1.62 |
| Persons Enrolled in Post High Education | 2.5 | 0.66 |

TABLE 3.15: CHARACTERISTICS OF THOSE REJECTED FOR INADEQUATE INCOME BY DEPENDENCY STATUS

| | Dependents | Independents |
|---|---|---|
| Percent rejected: | 2.2% | 10.4% |
| | N = 51,173 | N = 123,036 |
| Of those rejected: percent... | | |
| Never reentered | 25.5% | 27.0% |
| Reentered, rejected | 8.3 | 5.6 |
| Reentered, eligible | 62.3 | 64.9 |
| Reentered, ineligible | 3.9 | 2.5 |
| Changes: | | |
| Percent changing AGI | 27.1% | 13.7% |
| Average change | $5,770 | $2,560 |
| Percent changing NTI | 33.4% | 17.6% |
| Average change | $3,732 | $2,183 |
| No change in AGI, but accepted | 41.8% | 54.5% |
| No change in NTI, but accepted | 34.7% | 51.2% |

## TABLE 3.16: CHARACTERISTICS OF THOSE REJECTED FOR INADEQUATE INCOME WITH FARM OR BUSINESS ASSETS

| | Applicants with Farm Assets | Applicants with Business Assets | All Applicants |
|---|---|---|---|
| Percent Rejected: | 4.5% | 2.0% | 4.9% |
| | N = 5,107 | N = 3,036 | N = 174,209 |
| Of those rejected, percent: | | | |
| Never reentered | 15.5% | 15.2 | 26.5 |
| Reentered, rejected | 7.5 | 12.1 | 6.4 |
| Reentered, eligible | 65.0 | 65.2 | 64.1 |
| Reentered, ineligible | 12.0 | 7.6 | 3.0 |
| Changes: | | | |
| Percent changing AGI | 34.6% | 41.1% | 17.67% |
| Average change | $1,869 | $6,036 | $4,009 |
| Percent changing NTI | 10.7% | 7.5% | 22.3% |
| Average change | $3,224 | $5,414 | $2,865 |
| No change in AGI, but accepted | 46.6% | 38.0% | 50.8% |
| No change in NTI, but accepted | 66.9% | 66.4% | 46.0% |

less likely than the BEOG population to be rejected for this reason. Both groups are more likely than the total population to reapply. When they reapply, however, the farmers are ruled ineligible more frequently than all applicants while students with business assets are rejected a second time more frequently. Thus, the rate of eligibility for these individuals is similar to those typical for all applicants. Both of these kinds of applicants are more likely than the population to modify reported AGIs and both are less likely to modify nontaxable income. When modifications are made, however, they tend to be larger in scale than those made by others, with the exception of the average change in AGI for those with farm assets, which is somewhat smaller than the changes reported by all those seeking a Basic Grant. Those with business assets are less likely than most to be accepted for processing if they fail to modify reported AGI. Both of these groups are significantly more likely than most to be accepted without modifying reported nontaxable income.

Table 3.17 presents the results of analysis of the variations among applicants according to the types of schools they expect to attend. Those seeking to attend private, non-profit schools are less likely than others to be rejected for inadequate income statements on the first application. They are also slightly more likely to reapply, once rejected, and to modify income statements in their reapplications. Those planning to go to proprietary schools are significantly less likely to modify income statements upon reapplication. The same result applies to attainment of eligibility for a grant: private school students are most likely to become eligible, proprietary students less likely to. Those in the proprietary group are also less likely to be accepted for processing if they fail to modify either reported AGI or nontaxable income. These differences seem to indicate that private school applicants have more willingness to stay in the system, more familiarity with the procedures, get more help at schools in preparing applications, or are better able to supply requested information that satisfies BEOG requirements.

TABLE 3.17: THOSE REJECTED FOR INADEQUATE INCOME: VARIATIONS BY TYPE OF INSTITUTION CHOSEN

| | Public | Private | Proprietary |
|---|---|---|---|
| Percent Rejected | 5.4% | 3.3% | 5.4% |
| | N = 1,977,438 | N=823,182 | N=751,545 |
| Of Those Rejected: Percent: | | | |
| Never reentered | 25.2% | 21.3% | 33.7% |
| Reentered, rejected | 6.3 | 6.5 | 6.7 |
| Reentered, eligible | 65.4 | 68.7 | 57.5 |
| Reentered, ineligible | 3.1 | 3.6 | 2.1 |
| Changes: | | | |
| Percent changing AGI | 17.7% | 21.3% | 14.8% |
| Average change | $3,832 | $4,378 | $4,200 |
| Percent changing NTI | 21.7% | 26.19% | 21.3% |
| Average change | $2,826 | $2,768 | $3,054 |
| No change in AGI, but accepted | 52.1% | 52.4% | 46.1% |
| No change in NTI, but accepted | 48.0% | 47.4% | 39.6% |

Another source of these variations is the particular form used to apply for the Basic Grant. Any of four different versions may be utilized: the American College Testing (ACT) program, the BEOG form, the College Scholarship Service (CSS, which is especially likely to be used by private college applicants and by many other traditional institutions of higher education on the East Coast), and the form used by the Pennsylania Higher Education Assistance Agency (PHEAA). Differences could be explained by differences among the student populations using these forms as well as by the forms themselves. For example, just as the CSS form has been most widely used by those applying to traditional four-year universities and colleges, the BEOG form is frequently used by applicants to proprietary schools and two-year colleges. These latter students often come from families with lower incomes, which may explain why BEOG-form applicants are rejected more often for inadequate income than are users of the other forms, as may be seen in Table 3.18. The PHEAA application form yields the most rejections not reentering the system and the fewest eligible applicants. Reentry characteristics for those using the Basic Grant form are similar to the PHEAA, while the CSS form users are both less likely to drop out after rejection and more likely to eventually obtain eligibility. If PHEAA applicants are accepted, they fail to modify nontaxable incomes, while the CSS applicants are more likely than most to be accepted without changing AGI. There are substantial differences in sizes of AGI changes among those using the differing application instruments for reapplications. ACT applicants had an average change of $2,887 while PHEAA applicants' mean change was $7,740.

What are the ultimate effects of all of these adjustments and corrections, obtained through BEOG system edit checks and applicant reapplications? Table 3.19 shows that there is little or no direct association between modifying one's income statements and obtaining eligibility, unless the change is to supply a figure (which could be negative to zero) for Adjusted Gross Income when no data were supplied at the outset. Many applicants are not asked to submit different figures; some are asked only for verification of a prior zero or negative income statement in order for the applicant to become eligible. It is quite possible, of course, that those who changed would not have become eligible without the change, and that those who did not change reported accuratly on the first application. The IRS and validation sample analyses in succeeding chapters shed more light on these findings.

In addition to the "inadequate income" comment that was received by applicants, four other income-related comments were utilized by the BEOG system, and applicant response to these was examined. Of particular interest is the question of whether there is any effect of income on the types of responses received.

TABLE 3.18: EFFECT OF USING DIFFERENT APPLICATION FORMS FOR THOSE REJECTED FOR INADEQUATE INCOME

| | ACT | BEOG | CSS | PHEAA |
|---|---|---|---|---|
| Percent Rejected | 4.4% | 7.2% | 3.9% | 3.4% |
| | N = 25,526 | N = 63,892 | N = 64,834 | N = 4,076 |
| Of Those Rejected: Percent... | | | | |
| Never reentered | 26.4% | 31.3% | 21.4% | 32.5% |
| Reentered, rejected | 7.0 | 6.3 | 6.3 | 6.2 |
| Reentered, eligible | 63.1 | 60.5 | 68.6 | 57.6 |
| Reentered, ineligible | 3.6 | 2.0 | 3.6 | 3.7 |
| Changes: | | | | |
| Percent changing AGI | 22.9% | 14.1% | 19.3% | 16.2% |
| Average Change | $2,887 | $4,429 | $4,017 | $7,740 |
| Percent changing NTI | 21.8% | 20.5% | 24.0% | 26.8% |
| Average Change | $2,778 | $2,719 | $2,982 | $3,488 |
| No change in AGI, but accepted | 45.4% | 49.5% | 54.3% | 47.1% |
| No change in NTI, but accepted | 46.3% | 43.1% | 49.4% | 35.4% |

TABLE 3.19: CONSEQUENCES OF ADJUSTMENTS TO AGI AND NTI FOR THOSE REJECTED FOR INADEQUATE INCOME

| | Became Eligible | Became Ineligible | Rejected Again |
|---|---|---|---|
| AGI | | | |
| Changed | 80.9% | 11.5% | 7.6% |
| No Change | 89.9 | 1.6 | 8.5 |
| Left Blank* | 0.0 | 0.0 | 100.0 |
| NTI | | | |
| Changed | 88.7% | 5.9% | 5.4% |
| No Change | 87.0 | 3.1 | 9.9 |
| Left Blank** | 72.3 | 5.3 | 22.4 |

---

* 637 cases
**2,110 cases

The five comment types and the frequency with which they occurred may be seen in Table 3.20. Once the application has been returned to the applicant, revisions may be made to any of the data entries on the form. As may be seen, over nine percent of the applicants whose forms were returned decreased their AGI while almost seven percent decreased their NTI, thereby lowering their eligibility index (all other data held constant). The most frequently utilized income-related comment was "Rejection, Check Here." The comment was received by 22 percent of all applicants.

We examined the frequency with which applicants in the various income classes changed either AGI or NTI. Of the total, 43.8 percent of the applicants who received "Rejection, Check Here" comments changed their AGI. As may be seen in Table 3.21, these changes varied by income group.

The probability of an individual increasing AGI as a result of this comment decreases as income rises, while the probability of an individual decreasing reported AGI increases as total income rises. A similar pattern was found to be true for NTI. As is shown in Table 3.22, the net effect of these revisions is to raise reported AGI (by a mean value of $6,057.50) and NTI (by a mean value of $1,753.30) for those who changed AGI or NTI. Table 3.22 also indicates that not only do higher income applicants decrease reported AGI and NTI more frequently, but the average change among income groups decreases until, at upper income levels, the change becomes negative (reported AGI or NTI is actually reduced on average for the group as a whole). Some of these individuals may have been correcting previously made errors; others may be deliberately modifying data to increase the possibility of receiving a Grant.

TABLE 3.20: INCOME COMMENTS RECEIVED BY APPLICANTS

| Comment Received | Number of Applicants | Percent of All Applicants | Percent of those receiving comment who decreased: AGI | NTI |
|---|---|---|---|---|
| Review or Assumption Comment | 255,364 | 7.4 | 3.3 | 3.7 |
| Rejection, Check Here | 755,771 | 22.0 | 4.5 | 2.5 |
| Rejection, Provide Information | 262,116 | 7.6 | 32.1 | 12.5 |
| Inadequate Income Comment | 155,739 | 4.5 | 0.5 | 0.5 |
| Taxes Inconsistent with Income | 216,975 | 6.3 | 10.1 | 2.3 |
| TOTAL | 1,645,965 | 48.0 | 9.1 | 4.0 |

Note: Applicants in the Validation Sample are excluded from this Table.

TABLE 3.21: CHANGES TO AGI OR NTI AFTER RECEIVING REJECTION, CHECK HERE COMMENT

| Initial Income | Changes to AGI<br>Increase | Decrease | Changes to NTI<br>Increase | Decrease |
|---|---|---|---|---|
| Less Than Zero (% of row) | 26.3 | 3.1 | 10.3 | 1.2 |
| Zero (% of row) 43.7 | 0.2 | 15.7 | 0.0 | |
| $1 to $1000 (% of row) | 49.4 | 2.3 | 15.0 | 5.1 |
| $1001 to $3000 (% of row) | 46.7 | 2.2 | 6.1 | 5.5 |
| $3001 to $6000 (% of row) | 33.8 | 5.0 | 3.8 | 4.7 |
| $6001 to $12000 (% of row) | 26.6 | 8.4 | 2.9 | 3.1 |
| $12001 to $17500 (% of row) | 30.2 | 9.4 | 2.7 | 3.3 |
| $17501 to $25000 (% of row) | 29.0 | 10.5 | 1.9 | 4.0 |
| More than $25001 (% of row) | 24.9 | 14.2 | 1.5 | 8.0 |

TABLE 3.22: SIZES OF AGI AND NTI CHANGES MADE BY APPLICANTS AFTER RECEIVING REJECTION, CHECK HERE COMMENT

| Total Initial Income | Mean Initial AGI | Mean AGI Change | Magnitude of Change | Mean Initial NTI | Mean NTI Change | Magnitude of change |
|---|---|---|---|---|---|---|
| Less Than Zero | -$9018.3 | $12189.8 | | -$2033.1 | $ 4129.2 | |
| Zero | -$ 0.2 | $ 9628.9 | | -$ 0.8 | $ 3140.5 | |
| $1 to $1000 | $ 197.3 | $ 6125.2 | 3104.5% | $ 388.6 | $ 2180.0 | 643.8% |
| $1001 to $3000 | $ 800.0 | $ 5332.0 | 666.5% | $ 1526.8 | $ 575.9 | 37.7% |
| $3001 to $6000 | $ 2760.8 | $ 3655.5 | 132.4% | $ 3269.3 | -$ 730.8 | - 22.4% |
| $6001 to $12000 | $ 7678.0 | $ 2329.0 | 30.3% | $ 3597.0 | -$ 549.6 | - 15.3% |
| $12001 to $17500 | $13316.2 | $ 2098.2 | 15.8% | $ 5066.5 | -$ 980.2 | - 19.3% |
| $17501 to $25000 | $18879.8 | $ 2117.9 | 11.2% | $ 8695.7 | -$5588.7 | - 64.3% |
| More Than $25000 | $29882.9 | -$3249.3 | - 10.9% | $21001.2 | $17323.1 | - 82.5% |

## 3.8: CHAPTER SUMMARY

The major findings from studying zero/low/income applicants on the 1978-79 applicant data base follow:

- The zero and low adjusted gross income (AGI) applicants to Basic Grants do differ from the population as a whole along characteristics that affect their financial status significantly. Zero-income dependent applicants are more than twice as likely to report a family type other than a two-parent household than all dependents. Less than one-fourth report two-parent households compared to 69.1 percent of all dependent applicants. Zero-income independents, too, are not likely to be married. Those with low incomes show similar trends, but not as marked as the zero-income applicants;
- Zero income students account for over 80 percent of the cases of failure to report household size on their initial applications. More than one-fourth were rejected for inconsistent or missing information in this field, while only 1.3 percent of the BEOG population as a whole made this error;
- Low income applicants were far less likely than zero-income and more likely than all applicants to be rejected, but more likely than zero-income and all applicants to become eligible. Many of the zero-income applicants were rejected for inadequate financial resources, and failure to report household size while the low income applicants were not;
- While the zero/low-income applicants display large differences from the BEOG population as a whole, these differences are less pronounced for the low income group than for the zero-income group;
- Sources of income for zero/low-income applicants were mostly attributable to non-taxable income and the combination of non-taxable income and Social Security educational benefits. Only 11.9 percent of the zero AGI applicants in fact, do not report any means of support, while only 18.7 percent of low-income applicants were solely dependent on their adjusted gross income;
- Those applicants reporting non-taxable income as their only source of income other than AGI were most likely to become eligible with 93 percent of both zero and low income applicants who report NTI being eligible;
- Those rejected for inadequate income are less likely to resubmit their applications (13 percent reapply) than the BEOG applicantsas a whole (approximately one third reapply);
- In the BEOG system, correction actions and behaviors have a balancing effect: although many applicants lose a claimed zero- or low-income status, the same number of applicants gain that status. The effect is to have the general proportion of zero- and low-income applicants remain the same;

- Among those who were initially rejected for inadequate income and submitted changes to their applications, a small positive average AGI ($384) for eligibles was reported. Those who re-entered and became ineligible, however, reported AGI and NTI changes averaging over $9,000 in total, indicating a substantial amount of misreporting in the re-entered ineligible group. This group was however, quite small -- 4,321 individuals. Overall 17.7 percent of the rejected for inadequate income applicants changed their AGIs; this averaged $4,009. For the 22.3 percent who changed NTI, the change averaged $2,865;

- Those rejected for inadequate income who reported farm or business assets were more likely to reapply than others rejected for the same reason, and more likely to be rejected or declared ineligible on the basis of the re-submission. Although this group changed NTI less often, they had larger changes than all inadequate income applicants. They were much more likely to change AGI than all applicants, but those with farms had a lower average change, while those with businesses had a higher average change than other inadequate income applicants;

- The BEOG application was more likely than the multiple data entry forms to result in a rejection for inadequate income, but those that use the BEOG form were more likely to be to zero-or low-income applicants.

# 4

# BEOG-IRS DISCREPANCIES IN ZERO INCOME APPLICANT DATA

## 4.1: BACKGROUND AND KEY STUDY ISSUES

The 1976-77 BEOG applicant file and the 1976 IRS records for these applicants were merged to produce a single file of data on key financial and household items. For analysis purposes, the estimated applicant population resulting from a successful match was divided into the following study groups:[1]

- 3,228,487 Regular applicants, of whom there are:
  - .. 2,129,083 dependent applicants
  - .. 1,099,403 independent applicants
- 2,142,620 Eligible applicants, of whom there are:
  - .. 1,368,859 dependent applicants
  - .. 774,060 independent applicants
- 129,388 Eligible applicants with farm or business assets, of which there are:
  - .. 125,853 dependent applicants
  - .. 3,534 independent applicants

These study groups were also categorized according to whether or not an IRS record was obtained. These categories are subsequently referred to as matched or unmatched applicants. A match was defined in terms of parent's social security number (SSN) (or applicant's SSN, for independent students) and the first two letters of the pertinent last name (applicant or parent). The overall match rate was 71.3 percent. Dependent applicants had an overall match rate of 70.5 percent, and independents, of 72.8 percent.

The key issues to be resolved using the merged BEOG-IRS file were:

- to determine whether variations in average values for key data fields, and in the several definitions of low income exist by the presence or absence of an IRS record;
- to determine the extent to which AGI and EI discrepancies between BEOG and IRS records exist by BEOG-reported income level; and
- to assess the impact of various treatments of the definition of AGI and of low income on all applicants, eligible applicants and eligibles with farm or business assets.

Distinguishing differences between applicants who report zero income on their BEOG applications and all other applicants is a theme which underlies each of the objectives. Since it is not plausible that persons could be subsisting with no income or other financial support, we attempted to determine whether persons reporting zero income tended to meet the following conditions:

- non-taxable income not reported as income
- investment losses, indicated by the reported values for net assets, particularly business or farm assets
- low income offset by financial burdens such as household size, number in household in postsecondary educational institutions, unusual expenses, etc.

To perform these analyses, the key study variables were those indicative of financial support or of financial burden. These included:

- adjusted gross income (AGI)
- nontaxable income (NTI)
- portions earned (POR)
- federal taxes paid (TP)
- social security benefits (SSA)
- veteran's educational benefits (VEB)
- household size (HS)
- number in post-high education (PHE)
- net assets (NA)
- farm assets (FA)
- business assets (BA)
- applicant resources (AR)

- unusual expenses (UE)
- eligibility index. (EI)

These variables have been defined in Chapter 2. For most of these variables, the average current reported values were compared for each of the previously mentioned study groups. AGI and EI were examined at various levels as indicators of discrepancy between data reported on the BEOG application and that reported to IRS.

Each of the three objectives for this component of the Zero Income Study is addressed in a separate section of this chapter. Three of the four remaining sections relate to the objectives, and the final section summarizes the findings for this study component.

## 4.2: MATCH RATE VARIATIONS BY INCOME LEVEL, INCOME DEFINITION, DEPENDENCY STATUS AND PRESENCE/ABSENCE OF INVESTMENT ASSETS

As was stated in the previous section, 71.3 percent of all regular applicants' records were matched with IRS records. Dependent and independent students had similar match rates of 70.5 percent and 72.8 percent, respectively. When only the eligible applicant population is considered, the match rates decrease to 65.2 percent for all eligibles and to 61.7 percent and 71.3 percent for eligible dependent and independent applicants, respectively. The match rates for eligible applicants with farm or business assets, however, increase substantially, to 80.8 percent.

The text table below summarizes the match rates for the component applicant study groups.

MATCH RATES BY APPLICANT STUDY GROUPS

| STUDY GROUP | TOTAL MATCH RATE | DEPENDENT MATCH RATE | INDEPENDENT MATCH RATE |
|---|---|---|---|
| Total Regular Applicants | 71.3% | 70.5% | 72.8% |
| Eligible Applicants | 65.2 | 61.7 | 71.3 |
| Eligibles with Farm or Business Assets | 80.8 | 81.4 | 60.0 |

This table shows that, for independent applicants, an IRS record is obtained more frequently for all eligibles than for eligibles with farm or business assets, while the reverse is true for dependent applicants. This could mean that independents with farm or business assets are either reporting greater investment losses or have lower incomes (such that they are not filing with IRS) than dependents with such assets. On the other hand, it appears as though eligible dependent applicants with farm or business assets may be reporting similarly to IRS and to BEOG more often than those without such assets.

Examining match rates for these applicant groups by income level, we note that match rates vary significantly by dependency status and income level, as seen in Table 4.1. The highest match occurred for dependents with negative incomes and incomes above $12,000. For dependents, match rates tended to increase as income increased. For independents, match rates were more stable, except that rates were very low for independents with negative and high incomes. This probably is a questionable finding because very few independents are in these groups. Most noteworthy is the fact that the zero and low income dependents, who comprise a substantial proportion of the BEOG population evidenced match rates in the vicinity of 30 percent. Eligible applicants with farm or business assets, on the whole, have higher match rates than all regular applicants or than all eligible applicants. The independents' match rate for this group is lowered by the absence of any matches for those reporting negative income or income over $12,000. However, the number of applicants in these two groups is very small.

It is also interesting to note that higher match rates were obtained for eligible independents than for their dependent counterparts. However, match rates for dependents reporting negative incomes are much greater than for independents with negative income. Generally, dependent applicants reporting low incomes have much lower match rates than those reporting incomes over $6,000. Independent applicants' match rates are more consistent across income levels, except for those reporting negative income and income over $12,000. Low income applicants, for the most

## TABLE 4.1: MATCH RATES BY TOTAL INCOME AND DEPENDENCY STATUS

| | Regular Applicants | | Eligible Applicants | | Eligibles With Farm Or Business Assests | |
|---|---|---|---|---|---|---|
| | Dependent | Independent | Dependent | Independent | Dependent | Independent |
| Total | 70.5 | 72.8 | 61.7 | 71.3 | 81.4 | 60.0 |
| <0 | 85.4 | 25.8 | 85.2 | 22.1 | 85.5 | 0 |
| 0 | 31.7 | 70.2 | 31.5 | 70.3 | 82.7 | 83.3 |
| $1-500 | 27.6 | 72.2 | 27.3 | 72.2 | 75.9 | 62.2 |
| $501-1,000 | 34.0 | 79.6 | 33.8 | 79.6 | 68.2 | 91.6 |
| $1,001-6,000 | 46.7 | 75.0 | 46.2 | 70.8 | 78.1 | 60.4 |
| $6,001-12,000 | 72.7 | 71.7 | 71.0 | 67.9 | 83.0 | 62.7 |
| Over $12,000 | 84.7 | 53.2 | 79.8 | 50.9 | 84.7 | 0 |

Total income refers to adjusted gross income plus nontaxable income part, have the lowest match rates among the groups studied. This is particularly true for eligible dependent applicants, who probably have not filed a tax return due to their low income status. However, it is also possible that the lower match rates for dependents were influenced by the lack of requirement to report their parents' SSNs, a key component of the matching process.

We also examined average current field values for BEOG applicants to determine whether there was variation according to the presence or absence of IRS records. The data show that eligible applicants for whom an IRS match was obtainable, on the average, report higher values for critical fields than those for whom no IRS record was found, as Table 4.2 illustrates. However, unmatched eligibles do report higher nontaxable income and monthly Social Security benefits than those for whom a match was attained. These data lend further support to the hypothesis that unmatched eligibles may not have any taxable income and are not, for the most part, required to file tax returns. This supposition can be further tested by examining match rates by differing definitions of low income.

As discussed in Chapter 2, low income may be defined in terms of the presence or absence of various other types of financial support and/or burdens. For this study, nine typologies of low income were defined, as were listed in Chapter 2. Each of the typologies was examined relative the absence of any adjusted gross income, and the applicants dependency status and match rates. Table 4.3 highlights the results of this analysis for all applicants. (The trends for eligible applicants were similar.)

This table shows that more zero AGI applicants have only non-taxable income than have other resources, or other resources and NTI. The combined resources of NTI and SSA is the next most frequently met typology by dependent applicants, and those with all financial support fields zero or blank is the next most frequently met typology by

TABLE 4.2: AVERAGE FIELD VALUES ON CURRENT TRANSACTION BY PRESENCES/ABSENCE OF IRS RECORD

| | MATCHED ELIGIBLES AVERAGE VALUE | UNMATCHED ELIGIBLES AVERAGE VALUE |
|---|---|---|
| AGI | $5,330 | $3,401 |
| NTI | 868 | 1,590 |
| PORTIONS | 5,215 | 3,277 |
| TP | 347 | 209 |
| VEB | 16.7 | 8.9 |
| SSA | 13.3 | 18.7 |
| HS | 4.0 | 4.5 |
| PHE | 1.4 | 1.4 |
| AR | 55 | 32 |
| UE | 309 | 238 |
| NA | 4,711 | 2,884 |
| BA | 87 | 35 |
| FA | 632 | 192 |
| EI | 327 | 162 |

## TABLE 4.3: DEPENDENCY STATUS AND MATCH RATES FOR APPLICANTS MEETING LOW INCOME TYPOLOGIES

| | TOTAL APPLICANTS | | | DEPENDENT APPLICANTS | | | INDEPENDENT APPLICANTS | | |
|---|---|---|---|---|---|---|---|---|---|
| Typology | Number Meeting | Percent With Matched Records | Percent Of Total Meeting[1] | Number Meeting | Percent With Matched Records | Percent Of Total Meeting[2] | Number Meeting | Percent With Matched Records | Percent Of Total Meeting[3] |
| Total Zero Income | 605,876 | 44.7 | 100 | 282,026 | 26.1 | 100 | 323,849 | 60.8 | 100 |
| All Income Sources Zero or Blank | 68,152 | 62.2 | 11.3 | 11,032 | 34.1 | 3.9 | 57,120 | 67.7 | 17.6 |
| Earned Income Only | 0 | —— | —— | 0 | —— | —— | 0 | —— | —— |
| NTI Only | 388,961 | 41.4 | 64.2 | 173,773 | 23.4 | 61.6 | 215,188 | 56.0 | 66.5 |
| SSA Only | 3,266 | 42.2 | 0.6 | 1,944 | 26.2 | 0.7 | 1,322 | 65.6 | 0.4 |
| VEB Only | 9,649 | 82.3 | 1.6 | 611 | 15.0 | 0.2 | 9,037 | 86.9 | 2.8 |
| NTI + SSA | 93,717 | 38.2 | 15.5 | 71.214 | 30.3 | 25.2 | 22,502 | 63.1 | 6.8 |
| NTI + VEB | 23,362 | 62.6 | 3.8 | 8,299 | 25.3 | 2.9 | 15,062 | 83.2 | 4.6 |
| NTI + VEB + SSA | 18,766 | 39.9 | 3.1 | 15,150 | 32.7 | 5.4 | 3,616 | 70.5 | 1.1 |
| NTI + VEB + SSA + Portions | 0 | —— | —— | 0 | —— | —— | 0 | —— | —— |

[1] These percentages are based on the total number of applicants meeting any typology.

[2] These percentages are based on the number of dependent applicants meeting any typology.

[3] These percentages are based on the number of independent applicants meeting any typology.

independents. It is interesting to note that no zero AGI applicants met either typology containing earned income (portions) because in 1976-77 the processor assumed the AGI to be the sum of portions. Therefore, it is impossible for portions to exist without an AGI.

Match rates vary significantly by dependency status, and to a lesser extent, by typology. This substantiates the earlier findings that low income applicants have lower match rates than the total study group, and that among applicants reporting total income of less than $6,000, independents had substantially higher match rates than dependents. The average match rate for all applicants meeting low income typologies was about 45 percent whereas independent applicants had match rates of 56 percent or better for each typology met. These data suggest that dependent applicants meeting these typologies either have lower total income than the independents or that they are receiving a far greater amount of nontaxable income than independent applicants in similar income brackets. The latter hypothesis is supported by the fact that 25 percent of the dependents have both NTI and SSA, but only 6.8 percent of the independents meet this typology.

## 4.3: DISCREPANCIES BETWEEN BEOG AND IRS-REPORTED DATA

To determine whether there was variation in the accuracy of BEOG-reporting by income level, certain data from the IRS records were substituted for the BEOG-reported data. The following comparisons were made:

- discrepancies between BEOG and IRS-reported AGI by applicants' AGI
- discrepancies between BEOG and IRS-reported AGI by applicants' total income (AGI plus NTI)
- effect on applicants' eligibility indices (EI) of substituting IRS AGI for BEOG AGI by BEOG-reported total income and AGI levels
- effect on applicants' EIs by substituting IRS AGI and TP for BEOG AGI and TP by total BEOG-reported income and by BEOG-reported AGI.

Applicants were divided, for this analysis, into the following categories:

- all applicants
- eligible applicants
- eligibles with farm assets, and
- eligibles with business assets.

It was assumed that applicants with farm or business assets predominate among those reporting negative incomes and perhaps in the low income categories, as well. IRS-BEOG discrepancies are expected to exhibit different characteristics for these groups.

Table 4.4 demonstrates the results of substituting IRS-reported AGI for that reported to BEOG by total income level and by AGI level. This table shows that there is wide variation in accuracy of BEOG-reported AGI, both by income level and by applicant category. More than 90 percent of matched applicants whose total BEOG-reported income is zero are underreporting AGI. However, matched applicants with farm assets who report zero AGI are underreporting in less than 15 percent of the cases. Those with business assets are almost twice as accurate as all eligible applicants, but only a third as accurate as those with farm assets. These differences are just as striking when only AGI (greater than zero) is used as the measure of income. Overall, underreporting of AGI appears more frequent when NTI is not included in the measure of income. (The only exception to this trend is at the zero income level, as has been noted.)

It is also significant that the lowest frequency of underreporting AGI occurs for those reporting negative income, regardless of applicant category. Matched applicants reporting incomes under $3,000, particularly those with incomes under $1,000, underreport income more frequently than those in the moderate income range of $3,000-$12,000. Those with farm assets tend to underreport income less frequently than those with business assets in income ranges up $3,000, however, the reverse is true, for the most part, at incomes above this level.

## TABLE 4.4: DISCREPANCIES IN BEOG AGI, SUBSTITUTING IRS AGI, BY INCOME LEVEL AND APPLICANT CATEGORY[1]

| | | INCOME LEVELS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | < 0 | 0 | $1-1,000 | $1,001-3,000 | $3,001-6,000 | $6,001-12,000 | $12,001-17,500 | $17,501-25,000 | $25,001 & Over |
| **% UNDERREPORTED AGI, BY TOTAL INCOME[3]** | | | | | | | | | | |
| All Applicants | 58.1% | 17.8% | 91.6% | 65.0% | 57.7% | 54.1% | 55.9% | 59.1% | 58.1% | 53.8% |
| Eligibles | 59.5 | 17.6 | 91.8 | 65.0 | 58.2 | 55.4 | 57.3 | 58.9 | 57.3 | 60.1 |
| Eligibles With Farm Assets | 46.6 | 17.2 | 14.6 | 43.0 | 46.8 | 49.0 | 50.7 | 52.8 | 44.3 | 0 |
| Eligibles With Business Assets | 47.7 | 14.4 | 48.7 | 40.8 | 49.2 | 47.7 | 50.2 | 48.5 | 51.4 | 0 |
| **% UNDERREPORTED AGI, BY AGI[3]** | | | | | | | | | | |
| All Applicants | 58.1 | 17.9 | 85.3 | 70.8 | 61.7 | 56.8 | 56.2 | 58.6 | 58.3 | 53.6 |
| Eligibles | 59.5 | 17.6 | 85.4 | 70.9 | 62.4 | 58.5 | 57.4 | 58.4 | 56.9 | 50.0 |
| Eligibles With Farm Assets | 46.6 | 17.1 | 9.0 | 49.0 | 43.9 | 48.5 | 50.0 | 53.0 | 44.3 | 0 |
| Eligibles With Business Assets | 47.7 | 15.7 | 42.8 | 44.5 | 45.3 | 47.0 | 50.6 | 48.5 | 49.0 | 0 |
| **% OVERREPORTED AGI, BY TOTAL INCOME** | | | | | | | | | | |
| All Applicants | 27.3 | 43.1 | 2.5 | 34.7 | 41.7 | 41.3 | 30.5 | 18.4 | 10.5 | 19.8 |
| Eligibles | 31.4 | 43.2 | 2.4 | 34.7 | 41.2 | 40.2 | 30.0 | 20.4 | 13.0 | 33.8 |
| Eligibles With Farm Assets | 44.5 | 49.7 | 56.7 | 56.9 | 52.7 | 47.7 | 40.9 | 30.0 | 36.3 | 0 |
| Eligibles With Business Assets | 37.1 | 41.2 | 40.4 | 57.9 | 47.5 | 44.9 | 33.0 | 26.4 | 30.2 | 0 |
| **% OVERREPORTED AGI, BY AGI** | | | | | | | | | | |
| All Applicants | 27.3 | 44.0 | 8.3 | 23.3 | 37.3 | 39.7 | 31.9 | 19.4 | 10.8 | 19.8 |
| Eligibles | 31.4 | 44.0 | 8.3 | 28.2 | 36.6 | 37.9 | 31.2 | 21.4 | 13.0 | 45.3 |
| Eligibles With Farm Assets | 44.5 | 49.1 | 77.2 | 47.7 | 54.0 | 48.2 | 42.0 | 30.1 | 36.3 | 0 |
| Eligibles With Business Assets | 37.1 | 43.5 | 57.1 | 50.2 | 49.8 | 45.1 | 33.5 | 27.5 | 26.2 | 0 |

[1] Discrepancies are calculated by subtracting BEOG reported-data from the IRS data.

[2] Total income level refers to AGI plus NTI.

[3] BEOG-reported AGI is used here as the measure of income.

Income is most frequently overreported by those with farm assets, regardless of income level. Furthermore, more than 40 percent of applicants reporting negative income also overreport income on the BEOG application. For zero income applicants, another interesting pattern emerges -- overall, eligible applicants at this level rarely overreport income; however those with farm or business assets overreport their AGI in 77 percent and 57 percent of the cases, respectively. This means that many farmers/businessmen with negative incomes reported zero incomes. This "misreporting" is not of concern because negative incomes are considered to be zero in computing BEOG eligibility. More noteworthy is the finding that applicants with farm or business assets who have incomes over $25,000 report identical incomes to BEOG and IRS in 100 percent of the cases.

In summary, the following conclusions can be drawn from the information in this table. When the entire matched study group is considered, those who report negative incomes are least likely to be underreporting income to BEOG, and those with zero income, most likely to underreport. The likelihood of underreporting decreases up to incomes of $6,000 and $25,000 and then decreases for those reporting over $25,000. These patterns are similar when only the eligible applicant population is considered. The inclusion of NTI as a measure of income accounts for about a 5 percent increase in underreporting for zero income filers, and for very little difference in accuracy at other income levels. Therefore, it would seem that other sources of income, such as SSA and VEB, are not really "substitutes" for AGI for those reporting zero AGI.

When matched eligible applicants with farm or business assets are considered, the trends in misreporting are almost the reverse of those cited for all eligible applicants; i.e., those with incomes under $3,000 are more likely to overreport than to underreport income. Furthermore, these applicants with incomes over $25,000 show no incidence of misreporting. Thus, it would seem that future efforts to detect BEOG misreporters should exclude applicants with farm or business assets who report incomes of less than $3,000 or more than $25,000.

The effect of accurate data substitution on applicants' eligibility indices is demonstrated in the ensuing tables as follows: Table 4.5 can be compared with Table 4.6, as it highlights the frequency with which EI increases and decreases by income level. Tables 4.6 and 4.7 indicate the degree of EI discrepancies involved in the substitution of IRS for BEOG data by income level.

Table 4.5 reveals that many of the AGI discrepancies resulting from the substitution of IRS data, did not affect matched applicants' EIs. For example, although IRS substituted AGI showed underreporting for 58 percent of all BEOG applicants, the EIs of only 29 percent were increased by this substitution. A similar trend, but to a lesser extent, is evident for those who overreported AGI -- 27 percent of all matched applicants; the EIs of only 18 percent of these applicants were lowered by IRS AGI substitution.

This table also shows that matched applicants reporting zero income would be most likely and those reporting negative income least likely to have an EI increase, a finding that is consistent with the frequency of AGI discrepancies. Generally, as BEOG reported income levels increase, the probability of EI increasing with IRS AGI substitution is reduced. Applicants reporting incomes from $6,000-$12,000 are, however, somewhat more likely than applicants at any other income level (except zero) to have their EIs affected by substituting IRS AGI for BEOG-reported AGI. Eligibles with farm or business assets have less discrepant EIs than applicants in the other two categories, but the differences are less marked than AGI discrepancies suggested. Finally, the substitution of both AGI and Taxes Paid (TP) from IRS records generally has a greater likelihood of affecting EI than the substitution of AGI alone. The exception to this pattern is eligibles with farm or business assets who underreported AGI. This suggests that those who do underreport AGI in this group are not deliberately misreporting.

## TABLE 4.5: EI DISCREPANCIES[1] FROM IRS SUBSTITUTED DATA, BY INCOME LEVEL AND APPLICANT CATEGORY

| | INCOME LEVELS[2] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | <0 | 0 | $1-1,000 | $1,001-3,000 | $3,001-6,000 | $6,001-12,000 | $12,001-17,500 | $17,501-25,000 | $25,000 & Over |
| **% EI INCREASE, SUBSTITUTING AGI** | | | | | | | | | | |
| All Applicants | 29.3<br>(29.3) | 2.4<br>(2.2) | 41.6<br>(56.4) | 26.3<br>(27.6) | 37.5<br>(33.8) | 29.4<br>(29.9) | 37.4<br>(36.2) | 27.2<br>(26.6) | 16.3<br>(15.6) | 11.8<br>(9.7) |
| Eligibles | 31.4<br>(31.4) | 2.5<br>(2.3) | 41.6<br>(54.3) | 26.2<br>(25.3) | 35.6<br>(30.5) | 21.3<br>(22.6) | 36.9<br>(36.3) | 31.2<br>(30.8) | 20.4<br>(20.7) | 0<br>(0) |
| Eligibles With Farm or Business Assets | 19.5<br>(19.5) | 1.5<br>(1.4) | 6.0<br>(8.0) | 5.3<br>(7.3) | 4.7<br>(9.1) | 12.7<br>(15.0) | 27.6<br>(27.1) | 24.5<br>(23.7) | 17.0<br>(18.4) | 0<br>(0) |
| **% EI INCREASE, SUBSTITUTING AGI & TP** | | | | | | | | | | |
| All Applicants | 36.3<br>(36.4) | 2.4<br>(2.1) | 41.4<br>(56.1) | 27.6<br>(29.9) | 42.3<br>(38.7) | 32.3<br>(33.2) | 43.0<br>(42.2) | 37.6<br>(37.5) | 28.1<br>(27.5) | 22.9<br>(21.2) |
| Eligibles | 36.7<br>(36.7) | 2.5<br>(2.3) | 41.4<br>(54.0) | 27.5<br>(27.4) | 40.8<br>(35.6) | 22.3<br>(24.3) | 42.4<br>(42.3) | 42.9<br>(42.7) | 36.0<br>(36.1) | 64.6<br>(54.3) |
| Eligibles With Farm or Business Assets | 16.2<br>(16.2) | 1.5<br>(1.4) | 6.0<br>(8.0) | 5.3<br>(6.7) | 3.7<br>(6.7) | 9.5<br>(11.5) | 21.9<br>(21.4) | 24.4<br>(24.2) | 23.9<br>(25.9) | 0<br>(0) |
| **% EI DECREASE, SUBSTITUTING AGI** | | | | | | | | | | |
| All Applicants | 18.3<br>(18.3) | 51.3<br>(50.5) | 2.6<br>(1.0) | 3.0<br>(8.5) | 21.5<br>(23.7) | 18.9<br>(22.2) | 24.5<br>(23.9) | 16.8<br>(16.0) | 8.2<br>(8.0) | 16.9<br>(16.5) |
| Eligibles | 16.8<br>(16.8) | 48.1<br>(47.5) | 2.4<br>(.8) | 2.7<br>(6.9) | 19.1<br>(20.1) | 9.4<br>(13.6) | 21.8<br>(21.3) | 18.3<br>(17.5) | 9.7<br>(9.6) | 0<br>(0) |
| Eligibles With Farm or Business Assets | 20.9<br>(20.9) | 50.9<br>(49.9) | 24.2<br>(15.4) | 4.8<br>(9.3) | 6.7<br>(8.5) | 11.1<br>(13.7) | 25.5<br>(24.9) | 25.3<br>(24.4) | 25.6<br>(27.8) | 0<br>(0) |
| **% EI DECREASE, SUBSTITUTING AGI & TP** | | | | | | | | | | |
| All Applicants | 22.4<br>(22.4) | 51.3<br>(50.5) | 2.7<br>(1.2) | 2.3<br>(7.0) | 17.7<br>(20.1) | 17.5<br>(21.3) | 29.5<br>(29.7) | 24.6<br>(23.9) | 17.0<br>(16.9) | 26.3<br>(26.2) |
| Eligibles | 19.0<br>(19.0) | 48.1<br>(47.5) | 2.4<br>(1.0) | 2.0<br>(5.6) | 14.9<br>(16.3) | 10.0<br>(14.5) | 26.6<br>(26.8) | 24.3<br>(23.8) | 16.5<br>(16.5) | 0<br>(0) |
| Eligibles With Farm or Business Assets | 35.7<br>(35.7) | 50.9<br>(49.9) | 24.2<br>(15.4) | 4.8<br>(9.9) | 8.0<br>(11.1) | 16.4<br>(19.5) | 47.0<br>(47.6) | 51.6<br>(51.3) | 46.6<br>(42.1) | 0<br>(0) |

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[1] By subtracting the BLOG-reported data from the IRS data.

ry represents total income (AGI + NTI), the bottom line, AGI only.

# TABLE 4.6: DISTRIBUTION OF EI DISCREPANCIES BASED ON SUBSTITUTION OF IRS AGI BY TOTAL INCOME, BY PERCENT OF COLUMN

| | | TOTAL | 0 | 0 | $1-1,000 | $1,001-3,000 | $3,001-6,000 | $6,001-12,000 | $12,001-17,500 | $17,501-25,000 | $25,000 & Over |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WITH EI INCREASE | | | | | | | | | | | |
| 1,001 + | A[1] | 3.5 | 1.2 | 19.9 | 8.6 | 5.9 | 3.3 | 3.5 | 2.4 | 2.1 | 1.7 |
| | E[2] | 4.3 | 1.3 | 19.8 | 8.6 | 5.9 | 3.4 | 3.7 | 3.1 | 2.1 | 0 |
| | FB[3] | 1.9 | 1.0 | 6.1 | 1.7 | .8 | 2.2 | 1.9 | 2.1 | 3.2 | 0 |
| 801-1,000 | A | .9 | .4 | 2.5 | 1.5 | 1.0 | .9 | .9 | .7 | .7 | .6 |
| | E | 1.1 | .4 | 2.5 | 1.5 | 1.1 | .9 | 1.1 | .9 | .8 | 0 |
| | FB | .4 | 0 | 0 | 0 | .3 | .2 | .7 | .5 | 0 | 0 |
| 601-800 | A | 1.1 | .4 | 4.6 | 1.9 | 1.8 | 1.3 | 1.0 | 1.1 | .6 | .3 |
| | E | 1.4 | .4 | 4.6 | 1.9 | 1.8 | 1.2 | 1.2 | 1.3 | .9 | 0 |
| | FB | .3 | 0 | 0 | .6 | 0 | .8 | .9 | 1.4 | 2.7 | 0 |
| 401-600 | A | 1.6 | 0 | 4.2 | 3.2 | 2.4 | 1.4 | 1.6 | 1.4 | 1.3 | 1.3 |
| | E | 1.9 | 0 | 4.2 | 3.2 | 2.4 | 1.4 | 1.8 | 1.9 | 2.2 | 0 |
| | FB | .3 | 0 | 0 | .3 | 0 | .3 | 1.2 | 1.6 | 2.7 | 0 |
| 201-400 | A | 2.6 | 0 | 5.4 | 3.3 | 3.3 | 2.7 | 2.9 | 2.7 | 1.6 | . |
| | E | 3.1 | 0 | 5.4 | 3.2 | 3.3 | 2.6 | 3.1 | 3.0 | 3.6 | 0 |
| | FB | 1.7 | 0 | 0 | .8 | .9 | 1.1 | 2.4 | 1.9 | 0 | 0 |
| 101-200 | A | 2.2 | 0 | 2.3 | 2.6 | 2.4 | 2.1 | 2.5 | 2.2 | 1.8 | .8 |
| | E | 2.4 | 0 | 2.3 | 2.6 | 2.4 | 2.0 | 2.7 | 2.6 | 2.9 | 0 |
| | FB | 1.2 | 0 | 0 | 0 | .2 | .9 | 1.8 | 1.3 | 1.2 | 0 |
| 51-100 | A | 1.6 | .4 | .2 | 1.2 | 1.8 | 1.4 | 2.1 | 1.6 | 1.6 | .6 |
| | E | 1.8 | .4 | .2 | 1.2 | 1.7 | 1.2 | 2.2 | 2.1 | 1.9 | 0 |
| | FB | 1.2 | .5 | 0 | 0 | 0 | .4 | 1.9 | 1.7 | 0 | 0 |
| 1-50 | A | 15.7 | 0 | 2.5 | 3.9 | 18.8 | 16.3 | 22.7 | 15.1 | 6.5 | 5.4 |
| | E | 15.4 | 0 | 2.5 | 3.8 | 16.9 | 8.6 | 21.1 | 16.3 | 5.9 | 0 |
| | FB | 11.3 | 0 | 0 | 1.4 | 2.5 | 6.9 | 16.7 | 13.9 | 6.4 | 0 |
| WITH EI DECREASE | | | | | | | | | | | |
| 1-50 | A | 13.2 | 12.8 | .4 | 2.4 | 17.2 | 14.8 | 19.4 | 11.9 | 3.1 | 5.9 |
| | E | 12.6 | 13.6 | .4 | 2.3 | 15.1 | 7.0 | 16.9 | 13.0 | 3.9 | 0 |
| | FB | 12.0 | 15.0 | 0 | 2.3 | 3.4 | 8.2 | 15.8 | 14.3 | 8.0 | 0 |
| 51-100 | A | .8 | 11.8 | .6 | .3 | .8 | .8 | .8 | .8 | .3 | .8 |
| | E | .8 | 12.6 | .6 | .3 | .8 | .5 | .3 | .9 | 1.3 | 0 |
| | FB | 1.9 | 12.6 | 9.1 | 1.7 | .9 | .5 | 1.9 | 1.0 | 2.9 | 0 |
| 101-200 | A | .8 | 7.7 | .8 | .1 | 1.1 | .8 | .9 | .8 | .5 | .6 |
| | E | .9 | 8.2 | .8 | .1 | 1.0 | .6 | 1.0 | 1.0 | 1.2 | 0 |
| | FB | 2.0 | 8.8 | 9.1 | .8 | 0 | .6 | 2.4 | 2.4 | 0 | 0 |
| 201-400 | A | 1.0 | 7.8 | .6 | .1 | .9 | .8 | 1.3 | 1.1 | .3 | .7 |
| | E | 1.1 | 8.3 | .6 | 0 | .9 | .7 | 1.5 | 1.1 | .6 | 0 |
| | FB | 2.4 | 7.9 | 6.1 | 0 | 1.4 | .7 | 2.9 | 2.3 | 5.0 | 0 |
| 401-600 | A | .6 | 1.9 | 0 | 0 | .6 | .6 | .8 | .5 | .7 | .4 |
| | E | .6 | 0 | 2.3 | 0 | .6 | .3 | .8 | .8 | .4 | 0 |
| | FB | 1.1 | 2.4 | 0 | 0 | .2 | .6 | 1.3 | 1.8 | 2.7 | 0 |
| 601-800 | A | .4 | 1.9 | 0 | 0 | .4 | .2 | [illegible] | .4 | .5 | .6 |
| | E | .3 | 1.7 | 0 | 0 | .4 | .1 | .4 | .5 | .8 | 0 |
| | FB | .6 | 2.1 | 0 | 0 | .2 | .2 | .4 | 1.3 | 3.2 | 0 |
| 801-1,000 | A | .2 | 1.6 | 0 | 0 | .2 | .2 | .2 | .3 | 0 | .3 |
| | E | .2 | 1.7 | 0 | 0 | .2 | .1 | .3 | .5 | .5 | 0 |
| | FB | .6 | 2.1 | 0 | 0 | .5 | 0 | .7 | 1.4 | 0 | 0 |
| 1,001 + | A | 1.2 | 5.8 | .2 | .1 | .2 | .7 | .7 | .9 | 1.9 | 7.1 |
| | E | .1 | 0 | 0 | 0 | .1 | .1 | .1 | .2 | 1.0 | 0 |
| | FB | .3 | 0 | 0 | 0 | 0 | .3 | .2 | .7 | 2.7 | 0 |

[1] All applicants [2] Eligible applicants [3] Eligibles with farm or business assets

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# TABLE 4.7: DISTRIBUTION OF EI DISCREPANCIES BASED ON SUBSTITUTION OF IRS AGI AND TP, BY TOTAL INCOME

| | | TOTAL | 0 | 0 | $1-1,000 | $1,001-3,000 | $3,001-6,000 | $6,001-12,000 | $12,001-17,500 | $17,501-25,000 | $25,000 & Over |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EI INCREASE | | | | | | | | | | | |
| 1,001 + | A | 3.4 | 1.2 | 19.6 | 8.4 | 5.9 | 3.3 | 3.2 | 2.4 | 2.2 | 2.1 |
| | E | 4.2 | 1.3 | 19.4 | 8.4 | 5.9 | 3.2 | 3.4 | 3.0 | 2.9 | 50.6 |
| | FB | 1.7 | 1.0 | 6.1 | 1.7 | .7 | 1.8 | 1.7 | 1.7 | 3.2 | 0 |
| 801-1,000 | A | .9 | .4 | 2.7 | 1.6 | 1.3 | 1.0 | 1.1 | .7 | .6 | 0 |
| | E | 1.1 | .4 | 2.7 | 1.6 | 1.3 | .9 | 1.1 | .9 | .8 | 0 |
| | FB | .4 | 0 | 0 | 0 | .4 | .5 | .5 | .3 | 0 | 0 |
| 601-800 | A | 1.3 | .4 | 4.4 | 2.1 | 1.9 | 1.4 | 1.2 | 1.1 | .8 | 1.1 |
| | E | 1.5 | .4 | 4.4 | 2.1 | 1.9 | 1.1 | 1.4 | 1.4 | 1.2 | 0 |
| | FB | .9 | 0 | 0 | 0 | 0 | .6 | 1.1 | 1.8 | 3.7 | 0 |
| 401-600 | A | 1.9 | 0 | 4.2 | 3.4 | 2.6 | 1.6 | 2.0 | 2.1 | 1.7 | .6 |
| | E | 2.2 | 0 | 4.2 | 3.4 | 2.7 | 1.6 | 2.1 | 2.4 | 2.9 | 0 |
| | FB | .9 | 0 | 0 | 1.4 | .2 | .4 | 1.1 | 1.9 | 0 | 0 |
| 201-400 | A | 3.9 | 0 | 5.4 | 3.2 | 4.7 | 4.1 | 4.2 | 4.1 | 2.2 | 3.2 |
| | E | 3.9 | 0 | 5.4 | 3.2 | 4.9 | 3.1 | 3.9 | 4.2 | 4.3 | 0 |
| | FB | 2.0 | 0 | 0 | .8 | .7 | 1.4 | 2.6 | 3.2 | 3.4 | 0 |
| 101-200 | A | 4.7 | 0 | 2.3 | 3.0 | 5.9 | 4.5 | 4.3 | 5.0 | 4.6 | 1.0 |
| | E | 4.5 | 0 | 2.3 | 3.0 | 5.7 | 2.7 | 4.7 | 5.8 | 4.9 | 0 |
| | FB | 1.6 | 0 | 0 | 0 | .2 | .6 | 2.2 | 3.1 | 1.2 | 0 |
| 51-100 | A | 3.8 | .4 | .4 | 1.6 | 3.8 | 2.3 | 4.9 | 4.3 | 1.5 | 2.7 |
| | E | 3.9 | .4 | .4 | 1.6 | 3.7 | 1.8 | 5.3 | 5.2 | 5.0 | 0 |
| | FB | 1.5 | .5 | 0 | 0 | 0 | .8 | 1.9 | 2.8 | 3.0 | 0 |
| 1-50 | A | 16.4 | 0 | 2.5 | 4.3 | 16.2 | 13.9 | 21.3 | 17.9 | 12.5 | 12.2 |
| | E | 15.3 | 0 | 2.5 | 4.2 | 14.5 | 7.7 | 20.4 | 19.7 | 13.9 | 0 |
| | FB | 7.1 | 0 | 0 | 1.4 | 1.4 | 3.4 | 10.7 | 9.6 | 9.2 | 0 |
| EI DECREASE | | | | | | | | | | | |
| 1-50 | A | 12.4 | 12.7 | .4 | 1.7 | 13.6 | 11.4 | 17.0 | 13.2 | 5.9 | 8.3 |
| | E | 11.5 | 13.6 | .4 | 1.6 | 11.1 | 6.3 | 15.6 | 13.7 | 8.1 | 0 |
| | FB | 12.0 | 15.0 | 0 | 2.3 | 2.1 | 6.5 | 17.3 | 18.1 | 15.5 | 0 |
| 51-100 | A | 2.3 | 11.8 | .6 | .3 | .8 | 1.6 | 3.7 | 2.4 | 1.7 | 1.9 |
| | E | 2.3 | 12.6 | .6 | .3 | .8 | 1.2 | 3.5 | 3.0 | 2.4 | 0 |
| | FB | 7.6 | 12.6 | 9.1 | 1.7 | 1.9 | 3.5 | 10.1 | 10.5 | 3.1 | 0 |
| 101-200 | A | 2.6 | 7.7 | .8 | .1 | 1.1 | 1.5 | 4.2 | 3.4 | 1.8 | 1.3 |
| | E | 2.5 | 8.2 | .8 | .1 | .9 | 1.0 | 3.9 | 3.8 | 2.4 | 0 |
| | FB | 3.6 | 8.8 | 9.1 | .8 | 1.5 | 2.9 | 12.0 | 13.3 | 12.5 | 0 |
| 201-400 | A | 2.5 | 7.8 | .6 | .1 | .9 | 1.5 | 2.2 | 3.2 | 3.6 | 5.7 |
| | E | 1.4 | 8.3 | .6 | 0 | .9 | .9 | 1.8 | 1.9 | 1.3 | 0 |
| | FB | 3.6 | 7.9 | 6.1 | 0 | 1.4 | 1.9 | 4.3 | 4.5 | 9.1 | 0 |
| 401-600 | A | .8 | 1.9 | 0 | 0.1 | .6 | .6 | .9 | .8 | 1.1 | .5 |
| | E | .6 | 2.0 | 0 | 0 | .5 | .3 | .9 | .8 | .1 | 0 |
| | FB | 1.5 | 2.4 | 0 | 0 | 0 | 1.0 | 2.1 | 1.9 | 0 | 0 |
| 601-800 | A | .4 | 1.6 | 0 | 0 | .4 | .2 | .4 | .3 | [illegible] | .3 |
| | E | .3 | 1.7 | 0 | 0 | .4 | .1 | .3 | .2 | [illegible] | 0 |
| | FB | .6 | 2.1 | 0 | 0 | .5 | .3 | .5 | 1.4 | 3.2 | 0 |
| 801-1,000 | A | .3 | 1.8 | 0 | 0 | .2 | .2 | .3 | .3 | .2 | .6 |
| | E | .2 | 1.7 | 0 | 0 | .2 | .1 | .2 | .5 | .8 | 0 |
| | FB | .6 | 2.1 | 0 | 0 | .5 | 0 | .6 | 1.2 | 0 | 0 |
| 1,001 + | A | 1.1 | 5.9 | .2 | .1 | .2 | .8 | .7 | .9 | 1.3 | 7.1 |
| | E | .1 | 0 | 0 | 0 | .1 | .1 | .1 | .2 | .5 | 0 |
| | FB | .3 | 0 | 0 | 0 | 0 | .3 | .2 | .7 | 2.7 | 0 |

[1] All applicants

[2] Eligible applicants

[3] Eligibles with farm or business assets

Tables 4.6 and 4.7 show that the substitution of IRS AGI _and_ TP results in only slightly greater frequency of EI increases than the substitution of AGI alone. In terms of the frequency of EI decreases, the pattern is mixed: substitution of IRS AGI and TP results in few EI decreases of 1-50 points, whereas substitution of IRS AGI alone results in fewer decreases of 51-400 points. EI decreases of more than 400 points are about as frequent whether AGI alone or AGI and TP are substituted.

Both tables show that matched applicants who report (or the processor assumes) zero income tend to have the most frequent and largest EI increases. Applicants reporting income less than $1,000 also have a comparatively high rate of large EI increases when IRS data are substituted for BEOG data. Table 4.8 summarizes the information contained in Tables 4.6 and 4.7.

The preceding analysis may be summarized as follows. The largest EI increases pertain to matched zero income applicants, and the rate of discrepancy is more than twice as high as the next most frequently discrepant income level -- those reporting income under $1,000. Fewer than 6 percent of applicants reporting income over $3,000 have EI discrepancies of more than 400 points. Higher rates of discrepancy for applicants reporting incomes over $6,000 occur when the discrepancy is less than 400 points. EI decreases resulting from substitution of IRS for BEOG data occur most frequently for applicants reporting negative incomes. EIs of low income applicants are seldom decreased.

## 4.4: AGI DISCREPANCIES BY INCOME DEFINITION

In order to test the appropriateness of assuming a value for adjusted gross income, we simulated the impact of four different definitions of AGI and compared them with adjusted gross income reported to IRS. The following four definitions were used:

## TABLE 4.8: SUMMARY OF MOST FREQUENT EI CHANGES FROM SUBSTITUTION OF IRS FOR BEOG DATA, BY INCOME LEVEL

### EI INCREASE - ELIGIBLES

| CHANGES IN STUDENT ELIGIBILITY INDEX | SUBSTITUTION OF AGI ONLY | | SUBSTITUTION OF AGI AND NTI | |
|---|---|---|---|---|
| | Income Level | % Increase | Income Level | % Increase |
| 1,001 + | 0 | 19.8 | 0 | 19.6 |
| | $1-1,000 | 8.6 | $1-1,000 | 3.4 |
| | $1,001-3,000 | 5.9 | $1,001-3,000 | 5.9 |
| 401-1,000 | 0 | 11.3 | 0 | 11.3 |
| | $1-1,000 | 6.6 | $1-1,000 | 7.1 |
| | $1,001-3,000 | 5.3 | $1,001-3,000 | 5.9 |
| 100-400 | 0 | 7.7 | $12,001-17,500 | 10.0 |
| | $17,501-25,000 | 6.5 | $17,501-25,000 | 9.2 |
| | $1,001-3,000 | 5.7 | $1,001-3,000 | 10.6 |
| < 101 | $6,001-12,000 | 23.3 | $6,001-12,000 | 25.7 |
| | $1,001-3,000 | 18.6 | $12,001-17,500 | 24.9 |
| | $12,001-17,500 | 18.4 | $17,501-25,000 | 18.9 |
| **EI DECREASE - ELIGIBLES** | | | | |
| 1-100 | <0 | 26.2 | <0 | 26.2 |
| | $6,001-12,000 | 17.7 | $6,001-12,000 | 19.1 |
| | $12,001-17,500 | 13.9 | $12,001-17,500 | 16.7 |
| 101-400 | <0 | 16.5 | <0 | 16.5 |
| | $6,001-12,000 | 2.5 | $6,001-12,000 | 5.7 |
| | $12,001-17,500 | 2.1 | $12,001-17,500 | 5.7 |
| 401-1,000 | <0 | 5.4 | <0 | 5.4 |
| | $12,001-17,500 | 1.8 | $12,001-17,500 | 1.8 |
| | $17,501-25,000 | 1.7 | $17,501-25,000 | 1.8 |
| 1,001 + | $17,501-25,000 | 1.0 | $17,501-25,000 | .5 |
| | $12,001-17,500 | .2 | $12,001-17,500 | .2 |

(1) AGI is the value used in computing BEOG eligibility (actual or assumed);

(2) AGI is assumed by the BEOG processor;

(3) AGI is the value reported on the application (excludes all blanks and assumed values);

(4) AGI is the sum of the portions earned by mother and father (or by both spouses, in the case of married independents).

Definitions 2 and 3 are mutually exclusive, and together comprise applications to which Definition 1 is applied. There is overlap, however, between Definition 1 and the other definitions.

We examined discrepancies in AGI for the four definitions of AGI to determine if there was variation in the accuracy of data reported by these definitions. This comparison was also made for major applicant groups -- all applicants, all eligible applicants and eligible applicants with farm or business assets.

Table 4.9 demonstrates that substantial variation in AGI discrepancies does exist by AGI definition:

TABLE 4.9: AVERAGE AGI DISCREPANCIES BY AGI DEFINITION

| | DEFINITION 1 | | | DEFINITION 2 | | | DEFINITION 3 | | | DEFINITION 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % INCREASE[1] | % DECREASE[1] | $\overline{X}$ DISCREPANCY | % INCREASE | % DECREASE | $\overline{X}$ DISCREPANCY | % INCREASE | % DECREASE | $\overline{X}$ DISCREPANCY | % INCREASE | % DECREASE | $\overline{X}$ DISCREPANCY |
| All Applicants | 58 | 27 | $136 | 71 | 28 | $103 | 58 | 27 | $137 | 65 | 26 | $431 |
| Eligibles | 59 | 31 | $436 | 73 | 26 | $1,238 | 59 | 32 | $412 | 63 | 30 | $546 |
| Eligibles With Farm or Bussiness Assets | 47 | 40 | -$222 | 31 | 69 | -$2,208 | 47 | 40 | -$199 | 52 | 39 | -$228 |

[1] These percentages are based on the number of applicants for whom an IRS match was obtained.

This table shows that applicants for whom AGI is assumed tend to have the most discrepant AGIs when IRS data are substituted for BEOG data. These applicants have both the greatest incidence of EI increase as well as the largest average discrepancy, when eligible applicants are considered. Most interesting is that discrepancies occurred more frequently for this definition than when the sum of portions (definition 4) was applied to all applicants. This means that sum of portions provides a more accurate indicator of AGI in all applicants, but a less accurate indicator for those applicants whom this definition was applied by the BEOG processor.

It is also interesting to note that eligibles with farm or business assets are, on the average, overreporting AGI, regardless of AGI definition. The rate and amount of EI decrease for these applicants is far greater for those with assumed AGI than for any other AGI definition. Applicants for whom the reported AGI values are used (Definition 3), and those for whom either actual or assumed values are used (Definition 1) have similar rates and values of AGI discrepancies. Since the major proportion of applications for which Definition 1 is used are those with the actual (rather than assumed) AGI values, (97% of all eligibles), it is expected that Definitions 1 and 3 would exhibit similar discrepancy patterns. Those for whom AGI is the sum of portions (Definition 4) have the second highest rate and amount of discrepancy among the AGI definitions. The data show that AGI assumptions should be discontinued and that it is far more accurate to assume AGI as the sum of portions than to assume AGI in absence of portions.

Table 4.10 which follows, shows the range of AGI discrepancies by AGI definition and applicant category.

TABLE 4.10: FREQUENCY OF AGI DISCREPANCIES BY AMOUNT OF DISCREPANCY FOR AGI DEFINITIONS[1]

| | DEFINITION 1 | | | DEFINITION 2 | | | DEFINITION 3 | | | DEFINITION 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A[2] | E[3] | FB[4] | A | E | FB | A | E | FB | A | E | FB |
| TOTAL AGI INCREASE | | | | | | | | | | | | |
| 3,001 + | 4.9 | 6.9 | 4.1 | 17.0 | 17.6 | 7.4 | 4.7 | 6.6 | 4.0 | 7.9 | 8.7 | 7.9 |
| 1,001-3,000 | 5.6 | 7.4 | 4.0 | 18.2 | 19.2 | 6.1 | 5.3 | 7.1 | 4.0 | 8.1 | 8.9 | 6.6 |
| 401-1,000 | 4.1 | 5.3 | 2.6 | 10.3 | 10.8 | 4.4 | 3.9 | 5.2 | 2.6 | 6.7 | 6.6 | 4.0 |
| 1-401 | 43.5 | 39.9 | 36.6 | 25.4 | 25.1 | 12.8 | 43.8 | 40.3 | 36.9 | 41.8 | 39.3 | 33.6 |
| TOTAL AGI DECREASE | | | | | | | | | | | | |
| 1-400 | 21.6 | 25.1 | 27.3 | 13.2 | 13.4 | 18.6 | 21.7 | 25.5 | 27.4 | 19.2 | 22.7 | 22.1 |
| 401-1,000 | 1.6 | 1.9 | 2.7 | 3.1 | 3.4 | 5.4 | 1.6 | 1.8 | 2.7 | 2.3 | 2.2 | 3.6 |
| 1,001-3,000 | 2.0 | 2.4 | 4.3 | 4.8 | 4.8 | 10.5 | 1.9 | 2.4 | 4.2 | 2.7 | 2.7 | 5.2 |
| 3,001 + | 2.1 | 1.3 | 5.9 | 6.5 | 4.2 | 34.7 | 2.0 | 1.9 | 5.5 | 2.2 | 2.2 | 8.2 |

Applications for which Definition 2 is used have the highest rates of EI increases above 400 points. About 40 percent of applications for which the other three definitions are used show AGI increases of less than $400, compared to about 25 percent of eligibles for which Definition 2 is used. Throughout the AGI increase range, applicants with farm or business assets show substantially lower rates of increase than all applicants and all eligible applicants.

The majority of AGI decreases (as well as AGI increases) are in the range of $1 to $400. A significant deviation from this trend occurs for eligibles with farm and business assets for whom Definition 2 was used. Approximately 35 percent of these applicants have AGI decreases of over $3000 when IRS data is substituted for BEOG data. This indicates that these applicants have significant adjustments to earned portions that reduce AGI. Previous analyses have shown that applicants with farm and business assets who do report negative, zero or very low income tend to be more accurate than all other applicants reporting similar incomes.

To summarize, AGI discrepancies are largest and most frequent when AGI is assumed by BEOG. This is the case for both increases and decreases in AGI when IRS data are substituted for BEOG data. AGI increases are most likely for all eligible applicants and decreases for eligibles with farm or business assets. Since these assumptions are inaccurate for 99 percent of the cases for which IRS matches were obtained, more accurate reporting would probably be obtained by rejecting applicants with missing AGI.

Defining AGI in terms of the sum of portions is inaccurate for 40 percent of the matched cases. However, the degree of the discrepancy is much lower for eligible applicants than it is when AGI is assumed without portions. The errors in assuming AGI from portions are generally in the applicants' favor. This may mean that one portion is missing or that portions are underreported for these cases.

## 4.5: SUMMARY OF FINDINGS FOR ZERO-INCOME APPLICANTS

While the discrepancies for zero-income applicants appear to be substantially larger than those of other income categories, including the $1-$1,000 group, the match rate for low income applicants was significantly lower for all low income categories (under $6,000) than for the upper income groups or for BEOG applicants as a whole. While the match rates for the zero-income applicants and the $1-$1,000 income applicants are comparable, the absence of income may have a somewhat different effect on the types of matches from the presence of income. For example, there may be more non-matches because a tax return was never filed than because SSN wasn't supplied. It is, however, important to note the extremely high rate of discrepancies in AGI that were found among both zero AGI and zero total income applicants - a total of 93 percent of the matched applicants with total incomes of zero either overreported or underrreported (93.3 of zero-AGI applicants with a higher level of overreporting). For those with income of $1-$1,000, the incidence of underreporting is substantially lower but the incidence of overreporting increases dramatically.

These findings may indicate that the extremely low income applicants have a difficult time completing the applications correctly, rather than that they are deliberately misreporting. It may be, for example, that these applicants do not have records of earnings -- or do not think to check those records when filling out the application. They may be estimating from memory. This would explain why almost 100 percent of the $1-$1,000 group had discrepant AGIs and total income. The discrepancies, in fact were probably quite small, since only a fraction of the applicants with discrepancies would have had changes to their eligibility index with the IRS data substituted. Indeed, the rates of discrepancies across all income levels are quite high, indicating that applicants may simply have failed to transfer their tax return AGI and total income to the BEOG application. It is also possible that when estimating income, the zero-income group puts down the easiest figure to remember - zero, when in fact they may have had several hundred dollars in earnings.

The zero-income and $1-$1,000 income groups did exhibit the most frequent incidence of large EI changes as a result of IRS-substitution, even if the high non-match rate is considered, zero-income applicants had twice the rate of 1001 points or higher EI increases than did $1-$1,000 applicants (19.9 percent and 8.6 percent, respectively). The rate of this size increase for other income levels was less than 6 percent. However, because of the low match rate, it is important to examine other evidence to support any conclusions about misreporting and to identify possible couses for the high rate of discrepancies.

## 4.6: CHAPTER SUMMARY

This chapter was concerned with the accuracy of 1976-77 BEOG applicants' reported data determined by matching IRS and BEOG records and assessing the discrepancies in AGI and eligibility indices resulting from IRS data substitution. The study issues focused on the accuracy of BEOG-reported data by dependency status, by applicant category (all applicants, eligible applicants, and eligibles with farm or business assets), and by income level. Various definitions of low income and of AGI were examined for significant differences in match rates and accuracy rates. The major findings of these analyses were:

- IRS matches were obtained for fewer than 50 percent of all dependent applicants reporting incomes less than $6000 a year. Match rates for independents were generally higher than for dependents. All remaining findings are concerned with matched applicants only.
- Eligible applicants with farm or business assets have higher match rates than any other group of applicants.
- Income is most frequently overreported by eligible applicants with farm or business assets, regardless of income level. This group is also less likely than eligibles at any other income level to underreport income.
- More than 40 percent of all applicants reporting negative income also overreport income on the BEOG application. In general, those who report negative income are least likely to be underreporting income.
- Matched Applicants who report zero income are most likely (among applicants at various income levels) to underreport income.

- The most commonly met definition of low income is that for which all income fields except nontaxable income are blank. The next most frequently met low income typology is one in which nontaxable income and social security benefits are present and all other income fields blank. Match rates do not vary substantially by low income definition.
- Zero income applicants are the most discrepant among applicants reporting various income levels in terms of the frequency and magnitude of EI increases resulting from the substitution of IRS for BEOG data. Applicants reporting incomes under $3000 also exhibit large and frequent EI discrepancies.
- AGI discrepancies are largest and most frequent when the definition of AGI is a value assumed by BEOG. Ninety-nine percent of applications to which this AGI definition applied had discrepant EIs.

## END NOTES

1. More detailed information on study sample and match rates may be found in IRS Comparison Study Final Report.

# 5

# ZERO INCOME VALIDATION APPLICANTS

## 5.1: BACKGROUND

The BARC Validation File was developed to record information about applicants who underwent central validation during the 1977-78 academic year. Because the validation procedure yields considerable information concerning each applicant who responds to requests for validation, this section of the report will investigate the characteristics of validation participants who report zero/low income. The data will enable us to compare zero income applicants selected for validation with other samples of applicants discussed in other sections of the study, and will allow us to compare the characteristics of zero/low income applicants selected for validation with other validation participants. Specifically, the following study questions are addressed using the BARC validation file:

- What are the financial and demographic characteristics of the 1977-78 validation applicants?
- What is the response behavior to the validation process of those with zero/low income?
- What is the impact of validation on income and the eligibility index?
- How did applicants who responded substantiate a zero/low income?

It should be noted that the BARC File contains a sample of 1977-78 applicants who were selected randomly within pre-established criteria. Therefore, the aggregation of data from the BARC file will not be representative of the BEOG applicant population. Although it is recognized that the BARC data are not as current as data available on applicants selected for validation as the institution in 1978-79, it was decided that the BARC data would better meet the study objectives for the following reasons:

- Institutions were not required to validate until February 1979, and it is impossible to detect conclusively whether an applicant has or has not been validated. All cases on the BARC File underwent validation.
- Nontaxable income is an optional item for institutional validation; but was a required item, where appropriate, for the BARC sample.
- It was not possible to examine validation response behaviors in the institutional validation process while the BARC File has detailed records of these behaviors for its sample.

Thus, neither data base was ideal, but the BARC File does provide a higher degree of quality with respect to income accuracy and validation behaviors. The 1977-78 BARC File provides the transactional history of all cases validated by the contractor, including applicant characteristics and mode of case resolution, in addition to providing documentation to substantiate lack of income. The study group that resulted from the choice of the 1977-78 BARC File is described in Section 5.2 below.

## 5.2: STUDY GROUP

The data described in this section of the report pertains to the sample of 9,005 applicants who were selected for validation during 1977-78. At the time of selection for validation, this group had the following characteristics shown in Table 5.1.

Table 5.1: AVERGE VALUE OF CHARACTERISTICS BY INCOME CATEGORY OF APPLICANTS

| APPLICANT CHARACTERISTICS | Applicants with Zero AGI | Applicants with Zero AGI & NTI | All Applicants Selected |
|---|---|---|---|
| Adjusted Gross Income (AGI) | $ 0.00 | $ 0.00 | $8,386.30 |
| Non-taxable Income (NTI) | $ 971.60 | $ 0.00 | $ 545.30 |
| Taxes Paid | $ 92.90 | $121.70 | $1,027.80 |
| Household Size | 5.1 | 5.2 | 6 |
| Number in Post-High Education | 1.5 | 1.4 | 2.1 |
| Student Eligibility Index | 34.3 | 17.7 | 269.3 |
| | n = 1208 | n = 892 | n = 9005 |

NOTE: Data in columns are duplicated.

What is most interesting about these characteristics is that applicants reporting zero AGI or zero AGI plus NTI report paying taxes. These taxes are considerably smaller than the average of all applicants together, but they average $92.90 for the zero AGI group and $120.70 for the zero AGI plus NTI group. For all validation applicants taken together, the average taxes paid is $1,027.80, but the average AGI is some $8,386.30, compared to zero for the other groups. Zero AGI applicants have greater NTI than all applicants together: $971.60 as compared to $545.30. It should be pointed out that one of the criteria for selection in 1977-78 was taxes inconsistent with income; consequently, this is one reason for the inconsistency in income and taxes reported by the zero income applicants in the BARC file.

Those with zero AGI and zero AGI plus NTI reported small household sizes and fewer students in post-secondary education than all applicants. The SEIs of zero income validation applicants averaged less than 40 points, whereas the SEIs for all validation applicants averaged nearly 270 points. This difference is to be expected given the difference in AGIs.

The characteristics of validation applicants are discussed in more detail in the remaining sections of this chapter.

## 5.3: CHARACTERISTICS OF VALIDATION RESPONDENTS AND NON-RESPONDENTS

Because later analysis pertain only to validation respondents, it is of interest to first compare respondents to non-respondents. This will enable us to determine the extent to which the respondents are typical of the total study group from the 1977-78 BARC validation file. The following text table compares the attributes of respondents and non-respondents.

Table 5.2: AVERAGE VALUE OF CHARACTERISTICS BY RESPONSE BEHAVIOR OF APPLICANTS

| APPLICANT CHARACTERISTICS | Respondents | Non-Respondents |
|---|---|---|
| Adjusted Gross Income | $9,082.30 | $7,456.69 |
| Non-Taxable Income | $ 591.30 | $ 483.90 |
| Taxes Paid | $1,029.60 | $1,025.50 |
| Household Size | 5.8 | 6.3 |
| Number in Post High Education | 2.1 | 2.0 |
| Student Eligibility Index | 314.2 | 209.2 |
|  | N=5,150 (57.2%) | N=3,855 (42.8%) |

Of the total of 9,005 applicants selected for validation, 57.2 percent responded with changes to or verifications of their Student Eligibility Report (SER). The responding group had an average adjusted gross income (AGI) of $9,082.30 which is over $1,500 more than the average AGI of non-respondents. Respondents had slightly more non-taxable income (NTI), and slightly smaller household sizes. Respondents' average student eligibility index (SEI) was, therefore, 100 points higher than that of non-respondents (314.2 and 209.2, respectively). Respondents and non-respondents reported paying similar amounts of taxes despite the differences in average income. The non-respondents reported a slightly higher household size than respondents, but the number of students in post-secondary education reported by both groups was similar.

Table 5.3 shows that respondents are less likely than non-respondents to report zero AGIs or zero AGI plus NTI, and less likely to have incomes of $6,000 or less. Respondents were more likely than non-respondents to have incomes over $6,000. The differences between the groups show similar patterns when AGI is considered alone or when the total of AGI and NTI are considered together although the differences on the basis of total income are more pronounced.

Income offsets (household size and number of family members enrolled in post-secondary education) can have significant impact on the size of a Basic Grant award. The offsets represent non-discretionary funds used for basic subsistence expenses which must be met before any contribution from income to education expenses can be expected. The dollar size or rate of the offsets given to applicants depends on the family size the applicant or his/her parents are supporting. The sizes of these offsets reported by respondents and non-respondents to the validation effort were similar overall. For both offsets, the average size of the offset increased as income, increased as shown in Table 5.4.

Table 5.4: RESPONDENT/NONRESPONDENT COMPARISONS

| AGI AT SELECTION | AVERAGE HOUSEHOLD SIZE |  |  | AVERAGE NUMBER ENROLLED IN POSTSECONDARY EDUCATION |  |  |
|---|---|---|---|---|---|---|
|  | Respondents | Non-Respondents | Total | Respondents | Non-Respondents | Total |
| $0-$1,000 | 4.8 | 5.4 | 5.1 | 1.6 | 1.5 | 1.5 |
| $1,001-$6,000 | 4.5 | 5.3 | 4.9 | 1.8 | 1.9 | 1.9 |
| $6,001-$12,000 | 6.1 | 6.6 | 6.2 | 2.2 | 2.1 | 2.1 |
| AGI & NTI AT SELECTION |  |  |  |  |  |  |
| $12,001 & over | 6.9 | 7.4 | 7.1 | 2.6 | 2.4 | 2.5 |
| $0-$1,000 | 4.9 | 6.4 | 5.2 | 1.5 | 1.4 | 1.5 |
| $1,001-$6,000 | 4.3 | 5.1 | 4.7 | 1.7 | 1.9 | 1.8 |
| $6,001-$12,000 | 5.8 | 6.6 | 6.1 | 2.1 | 2.1 | 2.1 |
| $12,001 & over | 6.9 | 7.4 | 7.1 | 2.6 | 2.4 | 2.5 |

## TABLE 5.3: COMPARISON OF VALIDATION RESPONDENTS AND NON-RESPONDENTS BY REPORTED INCOME AT SELECTION

| | REPORTED ADJUSTED GROSS INCOME AT SELECTION AS A PERCENTAGE OF: | | | REPORTED TOTAL INCOME (AGI + NTI) AT SELECTION AS A PERCENTAGE OF: | | |
|---|---|---|---|---|---|---|
| Reported Income at Selection | Responding % of Column | Non-Responding % of Column | All Applicants % of Column | Responding % of Column | Non-Responding % of Column | All Applicants % of Column |
| Zero | 10.1 | 17.9 | 13.4 | 7.0 | 13.9 | 9.9 |
| $1-$500 | 0.7 | 1.1 | 0.9 | 0.7 | 1.1 | 0.9 |
| $501-$1,000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Subtotal (0-$1,000) | 10.7 | 19.0 | 14.3 | 7.7 | 15.0 | 15.2 |
| $1,001-$3,000 | 8.0 | 12.3 | 9.9 | 6.6 | 11.8 | 8.8 |
| $3,001-$6,000 | 8.5 | 9.6 | 9.0 | 9.6 | 11.1 | 10.2 |
| Subtotal ($1,001-$6,000) | 16.5 | 21.0 | 18.8 | 16.2 | 22.9 | 19.1 |
| $6,001-$9,000 | 17.4 | 16.4 | 17.0 | 16.9 | 16.7 | 16.8 |
| $9,001-$12,000 | 26.0 | 21.6 | 24.1 | 26.6 | 22.3 | 24.8 |
| Subtotal ($6,001-$12,000) | 43.4 | 38.0 | 41.1 | 43.5 | 39.0 | 41.6 |
| $12,001-$17,500 | 24.5 | 17.9 | 21.7 | 27.3 | 19.7 | 24.0 |
| $17,501-$21,000 | 4.1 | 2.4 | 3.4 | 4.7 | 2.7 | 3.8 |
| $21,001-$25,000 | 0.6 | 0.5 | 0.6 | 0.7 | 0.6 | 0.7 |
| $25,001 and over | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 |
| Subtotal ($12,001 and over) | 29.3 | 21.0 | 25.8 | 32.8 | 23.4 | 28.7 |
| | n = 5,150 | n = 3,855 | n = 9,005 | n = 5,150 | n = 3,855 | n = 9,005 |

In the lower income ranges, non-respondents reported lower values for both household size and the number enrolled in post-high education. As income increased, the non-respondents' increases in the size of household size rose faster than those of the respondents, so that, for higher income ranges, the non-respondents reported larger households. The size of the enrollment in post-secondary education remained similar for both groups.

## 5.4: VALIDATION RESPONSE PATTERNS

Determining how the 5,150 respondents resolved the validation request provides us with information on the accuracy of the data initially submitted and the impact of the validation process itself. Overall, responses consisted of the following:

- 208 (4.0%) did not use grants
- 75 (1.5%) were dropped from validation by OE decision
- 4,313 (83.8%) submitted corrections
- 554 (10.8%) confirmed information as submitted.

Table 5.5 compares the corrections behavior among students with differing AGIs at the time of selection. As may be seen, as income increases, the proportion of respondents submitting corrections increases, while the proportions of those confirming all fields or not responding decrease. For those reporting AGIs of $1,000 or less, 11.4 percent confirmed all fields and 58.7 percent did not respond. For those reporting AGIs of over $1,000 only slightly more than 5 percent confirmed all fields. Considerably fewer applicants with AGIs of $1,000 or more fail to respond--only 36.4 percent of those with AGIs of $1,000 are non-respondents, as compared with their lower income counterparts.

Higher income validation respondents are likeliest to correct AGI, but not NTI, in response to the validation request. For those with incomes over $6,000 at selection, about one-fourth corrected AGI, but not NTI. This group also had a high proportion of respondents correcting fields other than AGI and NTI, but very small percentages of those

## TABLE 5.5: RESPONSE DISTRIBUTION FOR VALIDATION APPLICANTS

| | | ACCEPTABLE RESPONSES | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AGI At Selection | TOTAL | Subtotal Submitting Corrections | Corrected AGI But Not NTI | Corrected NTI But Not AGI | Corrected Both AGI and NTI | Corrected Some Other Field | Confirmed All Fields | Unacceptable Responses |
| $0-$1,000<br>percent of row | N = 1,258 | 30.0 | 5.2 | 11.9 | 4.0 | 8.9 | 11.4 | 58.7 |
| $1,001-$6,000<br>percent of row | N = 1,652 | 42.7 | 13.6 | 8.8 | 8.5 | 11.7 | 5.1 | 52.2 |
| $6,001-$12,000<br>percent of row | N = 3,619 | 53.0 | 25.3 | 4.6 | 6.8 | 16.2 | 5.5 | 41.5 |
| $12,001 & over<br>percent of row | N = 2,268 | 57.9 | 30.4 | 2.2 | 3.5 | 21.7 | 5.6 | 36.4 |

correcting NTI. This pattern is consistent with the earlier finding that higher income applicants report lower levels of non-taxable incomes than lower income applicants. Presumably, with higher amounts of AGI, NTI (often from public assistnce programs) is not a source of income for these individuals.

For those earning less than $6,001, the frequency of corrections to each field were more evenly distributed across fields. For those reporting AGIs of less than $1,001, the NTI field was corrected more frequently than the AGI field, or all other fields.

The characteristics of zero/low income cases with each type of response behavior follows. Those earning $6,000 or less account for approximately one-third of applicants in the validation sample. Nearly sixty percent of all individuals with NTI but not AGI changes fall into this income category while less than 15 percent of AGI but not NTI changes occurred in this income range. More than one-fourth of those who confirmed all fields reported $0-$1,000 AGI at selection while accounting for only 14.3 percent of the study group. The corrections to NTI but not AGI and NTI plus AGI occur less frequently for those earning more than $12,000. Only 9.9 percent of NTI without AGI changes and only 15.5 percent of AGI plus NTI changes are attributable to this group, while they make up 25.8 percent of the population.

## 5.5: ZERO INCOME PROFILES FOR VALIDATION APPLICANTS

Further investigation of the zero/low income applicants who responded to validation required an examination of whether differences in their corrections behavior varied with such characteristics as reported AGI, NTI and household size. Accordingly, the typological analysis utilized for other sections of this study were modified to reflect the data available on the BARC File. The typologies varied household size and the presence/absence of NTI for all cases where the applicant's AGI was zero or blank, as shown in Table 5.6.

## TABLE 5.6: TYPOLOGY DEFINITIONS FOR VALIDATION SAMPLE

| Definitions | | | | Frequency | Percent of Zero Income | Percent of Total Validation Sample |
|---|---|---|---|---|---|---|
| Typology 1 | AGI = 0 | NTI = 0 | Household Size = 1-2 | 77 | 4.6 | 0.9 |
| 2 | AGI = 0 | NTI = 0 | Household Size = 3-4 | 386 | 22.9 | 4.3 |
| 3 | AGI = 0 | NTI = 0 | Household Size = 5 or more | 672 | 39.9 | 7.5 |
| 4 | AGI = 0 | NTI = 1 or more | Household Size = 1-2 | 63 | 3.7 | 0.7 |
| 5 | AGI = 0 | NTI = 1 or more | Household Size = 3-4 | 162 | 9.6 | 1.8 |
| 6 | AGI = 0 | NTI = 1 or more | Household Size = 5 or more | 326 | 19.3 | 3.7 |
| | | | | n = 1686 | | |

Because of the small sample sizes obtained for typologies 1 and 4, both with household sizes of 1-2, these typologies were combined with typologies 2 and 5, respectively, in the analyses presented below. To avoid confusion and to distinguish this set of typologies from those in the other sections of the Zero Income Study, these new typological definitions have been re-labelled, A-D, respectively. Table 5.7 summarizes the corrections behavior for each typology. Of those with total income of zero (Typologies A & B) 27 percent submitted corrections, compared to 42 percent of those with some non-taxable income (Typologies C & D). A higher proportion of those with a total income of zero in each household size category confirmed all fields than was the case for those who had reported some NTI. This finding confirms previous results which indicates that those who reported zero and blanks in key fields tend to confirm these fields rather than correct them. To some extent this may permit deliberate misreporting, since a "no income" situation legitimately does not have documentation. Thus, rather than submit documents contradicting the zero or blank information, the validation respondents may simply confirm. It is easier not to divulge a value than it is to document one that is inaccurate.

Those with zero total income and household size less than 5 were most likely to submit corrections to fields other than AGI and NTI if they corrected any fields at all. More than 15 percent of this group confirmed all fields, nearly half were non-respondents and 6.9 percent could not be located. The remaining typologies had lower incidences of confirming all fields and not being located, but the non-response rate is similar for all typologies. Those with non-taxable income were more likely to correct NTI rather than AGI or both AGI and NTI, than were those with no NTI. At least one-fifth of applicants reporting some NTI corrected that field, but not AGI, while approximately 14 percent of these groups corrected both AGI and NTI. There was little difference between groups of different household size but the similar income classification except that larger-sized households were less likely to confirm all fields than smaller ones. This trend is expected since, as household size increases, it becomes increasingly more difficult to support the family; therefore, the total lack of income becomes less plausible and more possibly a case of misreporting. Those with larger

TABLE 5.7: CORRECTIONS BEHAVIOR BY LOW-INCOME PROFILES

| | | Total | ACCEPTABLE RESPONSES | | | | | | UNACCEPTABLE RESPONSES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Subtotal | Corrected AGI But Not NTI | Corrected NTI But Not AGI | Corrected Both AGI and NTI | Corrected Some Other Field | Confirmed All Fields | Non-Response | Not Located | OE Decision |
| Typology A | N = | 463 | 125 | 38 | 30 | 10 | 47 | 71 | 128 | 32 | 7 |
| AGI = 0<br>NTI = 0<br>Household Size = 1-4 | % = | 100.0 | 27.0 | 8.2 | 6.5 | 2.2 | 10.2 | 15.3 | 49.2 | 6.9 | 1.5 |
| Typology B | N = | 672 | 181 | 58 | 46 | 14 | 63 | 57 | 417 | 15 | 2 |
| AGI = 0<br>NTI = 0<br>Household Size = 5 or more | % = | 100.0 | 26.9 | 8.6 | 6.8 | 2.1 | 9.4 | 8.5 | 62.1 | 2.2 | 0.3 |
| Typology C | N = | 225 | 95 | 5 | 49 | 31 | 10 | 25 | 95 | 8 | 2 |
| AGI = 0<br>NTI = $1 or more<br>Household Size = 1-4 | % = | 100.0 | 42.2 | 2.2 | 21.8 | 13.8 | 4.4 | 11.1 | 42.2 | 3.4 | 0.9 |
| Typology D | N = | 326 | 137 | 10 | 66 | 46 | 15 | 19 | 160 | 8 | 2 |
| AGI = 0<br>NTI = $1 or more<br>Household Size = 5 or more | % = | 100.0 | 42.0 | 3.1 | 20.2 | 14.1 | 4.6 | 5.8 | 49.1 | 2.5 | 0.6 |

sized households were more likely to be non-respondents than those with smaller ones, but less likely to have been defined as not located.

One of the most interesting features of the respondent group is that the vast majority tend to correct at least one field rather than reply confirming all the information supplied on the SER at the time of selection. Except for those in Typology A (Total Income = 0, Household size = 1-4), the ratio of those who corrected a field as opposed to confirming all fields varied from 3:1 to 7:1. The increasing ratio of corrections to confirmations with increasing household size and the addition of non-taxable income may be explained by the presence of more data that can be misreported (i.e., NTI), as well as by the increasing sources of income and numbers of family members.

Applicants in Typologies C and D, who report having non-taxable income, may be compared on the basis of NTI values as shown in Table 5.8.

Table 5.8: RESPONSE PATTERNS OF VALIDATION APPLICANTS REPORTING NON-TAXABLE INCOME AT SELECTION

| | | TOTAL | ACCEPTABLE RESPONSES | | UNACCEPTABLE RESPONSES | |
|---|---|---|---|---|---|---|
| | | % of Column | Number | % of Row | Number | % of Row |
| Typology C<br>AGI = 0<br>Household Size 1-4 | N = | 225<br>40.8% | 120 | 53.3 | 105 | 46.7 |
| NTI = | | | | | | |
| $1-$3,000 | N = | 119<br>21.6% | 54 | 45.4% | 65 | 54.6% |
| $3,001-$6.000 | N = | 81<br>14.7% | 48 | 59.3 | 33 | 40.7 |
| $6,001 & over | N = | 25<br>4.5% | 18 | 72.0 | 7 | 28.0 |
| Typology D<br>AGI = 0<br>Household Size<br>5 or more | N = | 326<br>59.2% | 156 | 47.9 | 170 | 52.1 |
| NTI = | | | | | | |
| $1-$3,000 | N = | 163<br>29.6% | 67 | 41.1 | 96 | 58.9 |
| $3,001-$6,000 | N = | 102<br>18.5% | 52 | 51.0 | 50 | 49.0 |
| $6,001 & over | N = | 61<br>11.1% | 3.7 | 60.7 | 24 | 39.3 |

For those with household size of 1-4, as non-taxable income increases, the likelihood of an acceptable response increases from 45.4 percent of those with income of $1-$3,000 to 72 percent of those with NTI of $6,000 or more. Overall, the rates of acceptable responses for those with household size of 5 or more is lower than those for the smaller households (47.9% compared with 53.3%), and the increasing rate of acceptable responses is much less dramatic for larger household sizes. Those applicants with larger household sizes are likelier than those with smaller ones to have NTI of $3,001 or more. This is to be expected since many sources of NTI such as Social Security and Welfare programs may have additional payments for additional dependents.

## 5.6: IMPACT OF VALIDATION ON SEI

Applicants' corrections behaviors affected their SEIs differentially according to the type of correction made. Overall, the average absolute change in the Eligibility Index (EI) for any corrections was 437 points with the mean effective EI change equal to 257 points for the 4,292 applicants making corrections. Of these, 20.6 percent became ineligible as a result of changes made. Of this group, those with incomes of $1-$3,000 had the largest EI changes as shown in Table 5.9. The highest incidence of ineligibility occurred for those with AGIs over $12,000. As with other BEOG analyses, the group with AGIs between $3,000-$6,000 experienced smaller changes than those with AGIs of $1-$3,000. All those applicants submitting corrections who initially reported zero or negative incomes had effective EI changes averaging 111 points; those with AGIs of $3,000-$6,000 had an average effective EI change of 169. Applicants in all other income brackets had average effective EI changes of 268 or more points.

As income increased, the mean effective EI did not change as rapidly as the absolute EI, since once a total score of 1,200 or more is obtained, any change in absolute points was considered meaningless because the 1,200 point level was the upper limit for eligibility in 1977-78. Thus, those in higher income brackets who began with higher SEIs before the corrections process, were more likely to reach this

TABLE 5.9: CORRECTIONS PROFILE BY ADJUSTED GROSS INCOME FOR VALIDATION RESPONDENTS WHO SUBMITTED CORRECTIONS

|  | Total | Less Than Zero | $1-$3,000 | $3,001-$6,000 | $6,001 $12,000 | $12,001 & Over |
|---|---|---|---|---|---|---|
| Corrected Any Field | 4,292 | 339 | 409 | 348 | 1,895 | 1,301 |
| Mean EI at Selection | 315 | 56 | 148 | 97 | 272 | 556 |
| Mean EI after Correction | 752 | 260 | 663 | 373 | 715 | 1,064 |
| Mean Absolute EI Change | 437 | 204 | 515 | 275 | 443 | 508 |
| Mean Effective EI Change | 257 | 111 | 335 | 169 | 268 | 279 |
| # Became Ineligible | 887 | 17 | 80 | 38 | 321 | 431 |
| % Became Ineligible | 20.6 | 5.0 | 19.6 | 10.9 | 16.9 | 33.1 |
| % Corrected AGI, But Not NTI | 43.9 | 14.4 | 35.0 | 31.6 | 47.7 | 52.3 |
| % Corrected NTI, But Not AGI | 11.9 | 41.5 | 19.1 | 21.8 | 8.7 | 3.9 |
| % Corrected Both AGI and NTI | 12.1 | 12.0 | 22.2 | 18.3 | 12.8 | 6.1 |
| % Did Not Correct AGI or NTI | 31.9 | 31.8 | 23.7 | 28.1 | 30.6 | 45.3 |

cutoff and therefore have lower "effective" EI changes. However, the impact of the EI change is, perhaps, greater for these individuals since they will have lost their grants.

Considering that the EI level of applicants with incomes between $1-$3,000 is quite low, it is surprising that almost 20 percent of the applicants in this range who submitted corrections became ineligible. While this rate of ineligibilty is lower than that for those with reported AGIs of $12,000 or more it is higher than that of both ranges $3,001-$6,000 and $6,001-$12,000. This indicates that these individuals were significantly underrepresenting their financial resources. As mentioned above, this group had higher absolute and effective EI changes than the $3,001-$12,000 ranges. The new average SEI level for the $1-$3,000 AGI group was far higher than for the $3,001-$6,000 range: 663 versus 373, respectively, but only 52 points less than the average for applicants whose AGI was $6,001-$12,000. The $1-$3,000 AGI group was most likely to change their AGIs as a result of validation, but less likely to change NTI. A higher proportion of this group changed income than the average for all groups. Overall, 69.1 percent of all those submitting corrections changed income in some way.

The impact of validation on the zero income group is quite different from that of the $1-$3,000 group. Only 72.8 percent of the zero-income applicants changed AGI and/or NTI, and only 5 percent of this group became ineligible. This group was likeliest to change NTI, but far less likely than average to change AGI. While 43.9 percent of all validation respondents who submitted corrections changed AGI, but not NTI, only 14.4 percent of the zero income applicants did this. On the other hand 41.5 percent of the zero income group changed NTI, not AGI, compared to a rate of 11.9 percent overall. This suggests that people reporting zero AGIs are "true" low income applicants, yet there is a possibility that they failed to report nontaxable income.

A more detailed examination of the SEI changes in terms of their impact on individuals using each major type of corrections to income follows:

- corrected AGI, but not NTI

- corrected NTI, but not AGI
- corrected both AGI and NTI

Overall 43.9 percent corrected AGI, 11.9 percent changed NTI and 12.1 percent changed both AGI and NTI, while 31.9 percent changed some other field but not AGI or NTI. Table 5.10 illustrated that, those who changed AGI but not NTI experienced some change in EI. The EI changes are larger for this group than for those who changed NTI or NTI and AGI. The average effective EI change resulting from correcting AGI but not NTI was 356 points. For 14.5 percent of this group, the correction to AGI resulted in a reduction of the AGI. Reductions to AGI were more concentrated in the $3,001-$6,000 range than for other income ranges. Increases to AGI were experienced by all of those with AGIs of zero or less, and by 85.5 percent of the applicants submitting corrections to AGI, but not NTI.

The largest average effective EI changes occurred in the $1-$3,000 income group. More than one-fourth of this income group who corrected AGI but not NTI became ineligible, despite their relatively low reported income when selected for validation.

Overall, those correcting AGI but not NTI experienced an average $2,790 change in AGI as a result of corrections. The largest change in AGI was experienced by those who initially reported zero or negative incomes: $5,420. The smallest average change of $2,191 occurred in the $3,001-$6,000 range. The sizes of changes for higher income groups were also low while the average changes for the $1-$3,000 group was nearly twice that of the $3,001-$6,000 range at $4,244.

For those who submitted corrections to NTI but not AGI, an average effective EI change of 185 points resulted. The rate of ineligibility as a result of validation for NTI corrections was only one-half that of those who changed AGI, but not NTI. It should be noted that those who changed NTI but not AGI represented only 11.9 percent of those making changes, thus, only 72 individuals became ineligible as a result of NTI changes. As shown in Table 5.11, more than one-fifth of this group decreased the level of non-taxable income they reported. The NTI corrections group did not display the same tendency as the AGI corrections group in the $1-$3,000 AGI range; they did not have

TABLE 5.10: CORRECTIONS PROFILE BY ADJUSTED GROSS INCOME FOR VALIDATION RESPONDENTS WHO CORRECTED AGI, BUT NOT NTI

| | Total | Less Than Zero | $1- $3,000 | $3,001- $6,000 | $6,001 $12,000 | $12,001 & Over |
|---|---|---|---|---|---|---|
| Corrected AGI Total | 1,887 | 49 | 143 | 110 | 904 | 681 |
| Mean EI at Selection | 328 | 11 | 115 | 42 | 244 | 552 |
| Mean EI after Correction | 967 | 422 | 914 | 430 | 881 | 1,217 |
| Mean Absolute EI Change | 638 | 411 | 799 | 387 | 637 | 664 |
| Mean Effective EI Change | 356 | 230 | 492 | 265 | 359 | 348 |
| # Became Ineligible | 535 | 4 | 41 | 15 | 193 | 282 |
| Became Ineligible, % of Column | 28.3% | 8.1% | 28.7% | 13.6% | 21.3% | 41.4% |
| Mean AGI Change | $2,790 | $5,420 | $4,244 | $2,191 | $2,835 | $2,637 |
| # Increased AGI | 1,612 | 49 | 119 | 86 | 763 | 595 |
| Increased AGI, % of Column | 85.5% | 100.0% | 83.2% | 78.1% | 84.4% | 87.4% |
| # Decreased AGI | 275 | 0 | 24 | 24 | 141 | 86 |
| Decreased AGI, % of Column | 14.5% | 0.0% | 16.8% | 21.8% | 15.5% | 12.6% |

TABLE 5.11: CORRECTIONS PROFILE BY ADJUSTED GROSS INCOME FOR VALIDATION RESPONDENTS WHO CORRECTED NTI BUT NOT AGI

| | Total | Less Than Zero | $1- $3,000 | $3,001- $6,000 | $6,001 $12,000 | $12,001 & Over |
|---|---|---|---|---|---|---|
| Corrected NTI Total | 512 | 141 | 78 | 76 | 166 | 51 |
| Mean EI at Selection | 230 | 45 | 147 | 141 | 369 | 551 |
| Mean EI After Correction | 508 | 140 | 555 | 282 | 715 | 1,113 |
| Mean Absolute EI Change | 277 | 94 | 407 | 141 | 346 | 562 |
| Mean Effective EI Change | 185 | 69 | 237 | 113 | 240 | 351 |
| # Became Ineligible | 72 | 4 | 12 | 3 | 31 | 22 |
| Became Ineligible, % of Column | 14.0% | 2.8% | 15.4% | 3.9% | 18.6% | 43.1% |
| Mean NTI Change | $1,342 | $1,712 | $925 | $1,611 | $973 | $1,753 |
| # Increased NTI | 403 | 116 | 60 | 59 | 126 | 42 |
| Increased NTI, % of Column | 78.7% | 82.2% | 76.9% | 77.6% | 75.9% | 82.4% |
| # Decreased NTI | 109 | 25 | 18 | 17 | 40 | 9 |
| Decreased NTI, % of Column | 21.2% | 17.7% | 23.1% | 22.3% | 24.0% | 17.7% |

substantially larger SEI changes than those with AGIs of $3,001-$6,000. The effective EI changes (237) the $1-$3,000 AGI applicants are about equal to the changes occurring for those earning $6,001-$12,000 (240 points). The highest SEI change for those who corrected NTI was experienced by those with AGIs over $12,000 at selection, with an effective change that averaged 351 points.

Those who corrected both AGI and NTI accounted for 12.1 percent of all those submitting corrections in response to the validation request. Of these, 69.6 percent increased their AGI, and 75.3 percent increased their NTI. The porportion of this group who became ineligible as a result of corrections was similar to the proportion who became ineligible after correcting AGI. The mean effective EI change for this group was 303 points. This rate was fairly consistent across income categories with the exception of the $3,001-$6,000 AGI group which experienced a mean effective EI change of only 138 points as shown in Table 5.12.

Overall, for those changing both AGI and NTI, NTI changes were larger than AGI changes, with the former averaging $1,288 and the latter, $871. AGI changes were greatest for those with AGIs of zero or less and in the $1-$3,000 range. On the other hand, changes to NTI were much larger for all groups earning $3,000 or more, and lower for those earning less. At least one-fourth of the applicants overall experienced decreases in AGI or NTI. Decreases in AGI were consistent across income categories, except for those with AGIs of zero or less. NTI decreases were more frequent for those with AGIs less than $3,001, and less frequent for those with AGIs over $3,000. The findings for the group that changed both AGI and NTI indicate that this group had problems in reporting their income accurately, but that this difficulty was probably caused by their misunderstanding the instructions and definitions of the application rather than deliberate misreporting.

If we look at the corrections characteristics described above by the applicants' total income (AGI plus NTI) similar patterns emerge overall, except that changes to those with zero or negative incomes had less pronounced changes to EI and those with incomes of $1-$3,000 had somewhat larger changes than had applicants whose AGIs only were in these ranges. Table 5.13 illustrates these results.

## TABLE 5.12: CORRECTIONS PROFILE BY ADJUSTED GROSS INCOME FOR VALIDATION RESPONDENTS CORRECTING BOTH AGI AND NTI

| | Total | Less Than Zero | $1-$3,000 | $3,001-$6,000 | $6,001 $12,000 | $12,001 & Over |
|---|---|---|---|---|---|---|
| Corrected AGI and NTI - Total | 520 | 41 | 91 | 64 | 244 | 80 |
| Mean EI at Selection | 299 | 113 | 138 | 184 | 333 | 569 |
| Mean EI After Correction | 830 | 603 | 632 | 558 | 862 | 1,296 |
| Mean Absolute EI Change | 531 | 490 | 494 | 373 | 528 | 727 |
| Mean Effective EI Change | 303 | 311 | 322 | 138 | 338 | 301 |
| # Became Ineligible | 146 | 8 | 20 | 10 | 70 | 38 |
| % of Column | 28.0% | 19.5% | 22.0% | 15.6% | 28.6% | 47.5% |
| Mean AGI Change | $871 | $2,994 | $1,965 | $22 | $379 | $803 |
| # Increased AGI | 362 | 41 | 63 | 41 | 161 | 56 |
| Increased AGI, % of Column | 69.6% | 100.0% | 69.2% | 64.0% | 65.9% | 70.0% |
| # Decreased AGI | 158 | 0 | 28 | 23 | 83 | 24 |
| Decreased AGI, % of Column | 30.3% | 0.0% | 30.8% | 35.9% | 34.0% | 30.0% |
| Mean NTI Change | $1,288 | $488 | $356 | $1,400 | $1,697 | $1,421 |
| # Increased NTI | 392 | 25 | 54 | 48 | 199 | 66 |
| Increased NTI, % of Column | 75.3% | 60.9% | 59.3% | 75.0% | 81.5% | 82.5% |
| # Decreased NTI | 128 | 16 | 37 | 16 | 45 | 14 |
| Decreased NTI, % of Column | 24.6% | 39.0% | 40.7% | 25.0% | 18.4% | 17.5% |

## TABLE 5.13: CORRECTIONS PROFILE BY TOTAL INCOME FOR VALIDATIONS RESPONDENTS CORRECTING ANY FIELDS

| Corrected Any Field | Total | Less Than Zero | $1- $3,000 | $3,001- $6,000 | $6,001 $12,000 | $12,001 & Over |
|---|---|---|---|---|---|---|
| | 4,292 | 222 | 339 | 386 | 1,892 | 1,453 |
| Mean EI at Selection | 315 | 37 | 129 | 47 | 248 | 559 |
| Mean EI after Correction | 752 | 219 | 703 | 316 | 685 | 1,049 |
| Mean Absolute EI Change | 437 | 182 | 573 | 269 | 436 | 490 |
| Mean Effective EI Change | 257 | 84 | 388 | 176 | 266 | 263 |
| # Became Ineligible | 887 | 6 | 73 | 40 | 296 | 472 |
| % Became Ineligible | 20.6 | 2.7 | 21.5 | 10.3 | 15.6 | 32.5 |
| % Corrected AGI, But Not NTI | 43.9 | 20.7 | 40.7 | 28.7 | 47.1 | 48.2 |
| % Corrected NTI, But Not AGI | 11.9 | 30.1 | 19.2 | 25.9 | 9.5 | 6.8 |
| % Corrected Both AGI and NTI | 12.1 | 4.0 | 16.2 | 19.6 | 12.8 | 9.4 |
| % Did Not Correct AGI or NTI | 31.9 | 45.0 | 23.1 | 25.6 | 30.3 | 35.7 |

## 5.7: SIZE OF DISCREPANCIES IDENTIFIED IN VALIDATION CORRECTIONS PROCESSES

The previous analyses in this chapter discussed the frequency and mean values of changes due to the validation corrections procedures. In this section, we will examine the sizes of changes in SEI and AGI as they were distributed among the validation respondents who submitted corrections. While applicants who submitted corrections generally increased their SEIs, some reduced them: 62.9 percent increased their SEIs significantly (by more than 50 points), 28.9 percent had changes within ±50 points, and 9.1 percent decreased their SEIs by more than 50 points. Table 5.14 below summarizes these findings.

Table 5.14: SIZE OF DISCREPANCIES IN SEI AFTER VALIDATION

| SEI Discrepancy Ranges | Number | Percent |
|---|---|---|
| Increased subtotal | 2715 | 62.9 |
| +801 or more | 757 | 17.4 |
| +401-800 | 632 | 14.5 |
| + 51-400 | 1326 | 30.5 |
| Remained the same | | |
| ± 50 | 1258 | 28.9 |
| Decreased | 394 | 9.1 |
| - 51-400 | 246 | 5.7 |
| -401-800 | 56 | 1.3 |
| -801 or less | 73 | 1.7 |
| Total correcting | 4348 | |

If we examine these discrepancies by the AGI the students reported at the time of their selection for validation (see Table 5.15), we find that those who had AGIs at selection of zero or less were most likely to experience little or no change to their SEIs (71.9 percent) while only 12.3 percent of those with AGIs over $12,000 had insignificant changes to their SEIs. Moreover, zero and negative income applicants had the lowest rate of increases to SEI, while the over $12,000 category had the highest rate of increases. As found in other analyses the $3,001-$6,000 AGI

TABLE 5.15: DISTRIBUTION OF SEI DISCREPANCIES BY ADJUSTED GROSS INCOME FOR APPLICANTS SUBMITTING CORRECTIONS

|  |  | AGI At Selection |  |  |  |  |
|---|---|---|---|---|---|---|
| SEI Discrepancies | Total % of Column | Zero or Less % of Column | $1- $3,000 % of Column | $3,001- $6,000 % of Column | $6,001 $12,000 % of Column | $12,001 & Over % of Column |
| Total Increase | 62.9 | 19.5 | 56.1 | 31.7 | 63.2 | 75.2 |
| +801 or more | 17.4 | 7.2 | 23.1 | 12.1 | 16.3 | 21.5 |
| +401-800 | 14.5 | 4.3 | 12.1 | 5.6 | 15.5 | 19.0 |
| +51-400 | 30.5 | 9.2 | 22.1 | 14.3 | 33.3 | 39.1 |
| Remained the Same ±50 | 28.9 | 71.9 | 39.7 | 60.1 | 25.5 | 12.3 |
| -51-400 | 5.7 | 4.3 | 0.5 | 3.4 | 6.1 | 7.6 |
| -401-800 | 1.3 | 0.3 | 1.7 | 1.7 | 1.5 | 1.0 |
| -801 or less | 1.7 | 2.9 | 1.0 | 2.8 | 1.8 | 1.1 |
| Total Decrease | 9.1 | 5.6 | 4.4 | 9.8 | 10.0 | 9.7 |
|  | N = 4348 | 349 | 412 | 356 | 1918 | 1313 |

group had fewer significant changes to SEI than the $1-$3,000 AGI applicants (31.7 percent increased compared to 56.1 percent, respectively).

The frequency of increases for the $1-$3,000 income group was nearly as high as that for the $6,000 and over categories (56.1 percent compared to 63.2 percent for those with AGIs of $6,001-$12,000 and 75.2 percent for the over $12,000 group), but the lower income group had a much higher incidence of insignificant change (39.6 percent compared to 25.5 percent and 12.3 percent, respectively). Interestingly, those with AGIs of $1-$3,000 had the lowest rate of decrease (4.4 percent) of any group, but decreases were only experienced by a small part of the population overall, and were not consistently related to income level.

Increases to SEIs were most often in the 51-400 point range, except for students reporting incomes of $1-$3,000 range where the most frequent increases were greater than 800 points. As income increased, the smaller discrepancies became much more frequent than the larger. However, for these income groups, larger SEI changes become meaningless once ineligiblity is attained.

It is also of interest to note, as shown in the text table below, that the low income applicants were least likely to correct their applications when responding to the validation request. That is, they were most likely to confirm fields when responding. While the zero or negative income group had a 28.5 percent rate of not correcting any fields, other groups had less than half that frequency of not correcting as shown below.

AGI At Selection

| | Total % of Column | Zero or Less % of Column | $1-$3,000 % of Column | $3,001-$6,000 % of Column | $6,001 $12,000 % of Column | $12,001 & Over % of Column |
|---|---|---|---|---|---|---|
| Total Correcting | 88.5 | 71.5 | 90.5 | 86.6 | 90.6 | 91.1 |
| Total Not Correcting | 11.5 | 28.5 | 9.5 | 13.4 | 9.4 | 8.9 |
| Total Respondents | N = 4,911 | 488 | 455 | 411 | 2,116 | 1,441 |

Earlier results indicated that those who submitted corrections most frequently changed their AGI. More than half of the validation respondents changed their AGI by $51 or more. Of those submitting corrections, 43.8 percent increased their AGIs by $51 or more, while 9.7 percent decreased their AGIs by that amount. Overall, the mean AGI discrepancy was $1,342.89, with the lowest discrepancy for those in the $3,001-$6,000 AGI range where discrepancies averaged $659.76. The text table below summarizes the discrepancies in AGI experienced by validation respondents. As may be seen, the highest frequency of significant discrepancies (greater than $50) occurred where discrepancies were the largest -- the highest rate of increases to AGI occurred where the increases were greater than $3,000.

| AGI Discrepancies | Number | Percent |
|---|---|---|
| Total Increases | 1903 | 43.8 |
| $3,001 or more | 795 | 18.3 |
| $1,001-$3,000 | 550 | 12.6 |
| $401-$1,000 | 273 | 6.3 |
| $51-400 | 285 | 6.6 |
| ±$50 | 2040 | 46.9 |
| -$51-$400 | 100 | 2.3 |
| -$401-$1,000 | 82 | 1.9 |
| -$1,001-$3,000 | 104 | 2.4 |
| -$3,001 or less | 119 | 2.7 |
| Total Decreases | 422 | 9.1 |
| Total Correcting | 4348 | |

More than 35 percent of all validation applicants who submitted corrections changed their AGIs by more than $1,000, while 46.9 percent changed their AGIs by less than $51.

Table 5.16 examines these findings in more detail, focusing on the relationships of AGI discrepancies to the AGI level of the student at the time of selection for validation. This table indicates that the zero/negative income group had the lowest rates of discrepancy, with 73.6

## TABLE 5.16: DISTRIBUTION OF ADJUSTED GROSS INCOME DISCREPANCIES FOR APPLICANTS SUBMITTING CORRECTIONS BY ADJUSTED GROSS INCOME

| | | AGI At Selection | | | | |
|---|---|---|---|---|---|---|
| Adjusted Gross Income Discrepancies | Total % of Column | Zero or Less % of Column | $1-$3,000 % of Column | $3,001-$6,000 % of Column | $6,001 $12,000 % of Column | $12,001 & Over % of Column |
| Total Increases | 43.8 | 26.4 | 42.7 | 35.7 | 46.5 | 47.0 |
| +$3,001 or more | 18.3 | 12.9 | 18.2 | 10.4 | 19.8 | 19.6 |
| $1,001-$3,000 | 12.6 | 7.7 | 12.4 | 9.0 | 13.4 | 13.9 |
| $401-$1,000 | 6.3 | 4.3 | 4.9 | 7.9 | 6.9 | 5.9 |
| $51-$400 | 6.6 | 1.4 | 7.3 | 8.4 | 6.3 | 7.5 |
| Remained the Same +$50 | 46.9 | 73.6 | 46.4 | 50.8 | 42.7 | 45.1 |
| -$51-$400 | 2.3 | - | 3.2 | 2.8 | 2.7 | 2.0 |
| -$401-$1,000 | 1.9 | - | 2.9 | 2.5 | 2.5 | 1.0 |
| -$1,001-$3,000 | 2.4 | - | 4.9 | 2.5 | 2.5 | 2.1 |
| $3,001 or less | 2.7 | - | - | 5.6 | 3.2 | 2.9 |
| Total Decreases | 9.7 | - | 10.9 | 13.5 | 10.8 | 7.9 |
| | N = 4,348 | 349 | 412 | 356 | 1,918 | 1,313 |

percent changing by less than $50, and no significant decrease. The $3,001-$6,000 AGI group had a lower rate of increase in AGI than all other groups with AGIs of $1 or above, and a higher rate of decreases in AGI than all other income ranges.

The average size of AGI discrepancies for applicants submitting corrections may be summarized as follows:

| AGI at Selection | Average AGI Discrepancy |
|---|---|
| Total | $1,342.89 |
| Zero or less | $1,125.56 |
| $1-$3,000 | $1,918.53 |
| $3,001-$6,000 | $ 659.76 |
| $6,001-$12,000 | $1,408.40 |
| $12,001 and over | $1,467.93 |

These figures indicate that the largest average discrepancy occurred for the $1-$3,000 AGI group, with somewhat lower discrepancies for all other income ranges. Table 5.17 illustrates how these discrepancies affected the AGI distribution for those submitting corrections by comparing current AGIs with those reported at the time of selection. Overall, about three-fourths of the applicants remained in the same income category after completing validation. The $12,000 or more category was likeliest to remain stable (96.4% remained the same) since

TABLE 5.17: DISTRIBUTION OF ADJUSTED GROSS INCOME REPORTED AT SELECTION AND AFTER VALIDATION FOR APPLICANTS WHO SUBMITTED CORRECTIONS

| | AGI At Selection | | | | | |
|---|---|---|---|---|---|---|
| Current AGI | Total % of Column | Zero or Less % of Column | $1- $3,000 % of Column | $3,001- $6,000 % of Column | $6,001 $12,000 % of Column | $12,001 & Over % of Column |
| 0 or less | 7.2 | 73.6 | 4.9 | 4.8 | 0.8 | 0.2 |
| $1-$3,000 | 8.1 | 13.5 | 66.5 | 3.9 | 0.7 | 0.4 |
| $3,001-$6,000 | 8.8 | 7.7 | 14.6 | 72.2 | 1.8 | 0.5 |
| $6,001-$12,000 | 34.5 | 3.7 | 7.8 | 15.2 | 71.3 | 2.5 |
| $12,001 or more | 41.4 | 1.4 | 6.3 | 3.9 | 25.5 | 96.4 |
| N = | 4,348 | 349 | 412 | 356 | 1,918 | 1,313 |

any increases would cause them to remain in this category. The income group least likely to remain the same was the $1-$3,000 AGI group of which 28.7 percent moved into higher income categories with 14.1 percent changing by more than one interval. The zero/negative income group was most likely of the under $12,001 groups to remain the same with 73.6 percent maintaining membership in this group.

## 5.8 SOURCES OF INCOME FOR ZERO/LOW INCOME VALIDATION RESPONDENTS

Those applicants who were selected for validation on the basis of a questionable item on their SERs related to income were required to submit documentation to support the level of income as reported, or corrected. The information they provided enables us to investigate in detail the sources of income/support that the zero- and extremely low-income applicants use which enable them to live from day to day. A sample of 304 validation respondents who confirmed income were selected for review if they met one of nine typologies based on AGI, NTI and household size levels. The AGI was equal to zero for all typologies. The typologies, then, varied NTI and household size:

| | | | | |
|---|---|---|---|---|
| Typology | 1 | AGI = 0 | NTI = 0 | Household Size = 1-2 |
| | 2 | AGI = 0 | NTI = 0 | Household Size = 3-4 |
| | 3 | AGI = 0 | NTI = 0 | Household Size = 5 or more |
| | 4 | AGI = 0 | NTI = $1-$2,999 | Household Size = 1-2 |
| | 5 | AGI = 0 | NTI = $3,000 or more | Household Size = 1-2 |
| | 6 | AGI = 0 | NTI = $1-$2,999 | Household Size = 3-4 |
| | 7 | AGI = 0 | NTI = $3,000 or more | Household Size = 5 or more |
| | 8 | AGI = 0 | NTI = $1-$2,999 | Household Size = 5 or more |
| | 9 | AGI = 0 | NTI = $3,000 or more | Household Size = 5 or more |

The total line on Table 5.18 shows the proportions of validation applicants meeting each of these typologies. The majority of cases were defined as having zero AGI, zero NTI and household size of 3 or more (typologies 2 and 3). Table 5.18 summarizes the distribution of applicants by typology and the sources of income they reported. Several applicants reported more than one source of support.
Government-sponsored support accounted for 31.9 percent of the cases, while private support was reported by 41.8 percent. Of the remaining applicants, 10.9 percent attributed their support to financial aid,

### TABLE 5.18: SOURCES OF SUPPORT FOR ZERO/LOW INCOME VALIDATION SAMPLE

| | No NTI | | | NTI | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Source of Income | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | T |
| Dept. of Social Services | 11 | 0 | 11 | 3 | 4 | 3 | 10 | 2 | 11 | 45 |
| % of column | 6.7 | | 8.1 | 42.9 | 80.0 | 12.1 | 58.8 | 33.3 | 44 | 13.6 |
| Dept. of Public Welfare | 0 | 4 | 9 | 0 | 0 | 3 | 1 | 1 | 4 | 22 |
| % of column | | 3.7 | 6.7 | | | 27.3 | 5.9 | 16.7 | 16 | 6.7 |
| Veteran's Administration | 72 | 8 | 3 | 1 | 0 | 0 | 1 | 1 | 3 | 20 |
| % of column | 13.3 | 7.3 | 2.2 | 14.3 | | | 5.9 | 16.7 | 12 | 6.1 |
| Financial Aid | 6 | 17 | 11 | 1 | 0 | 1 | 0 | 0 | 0 | 36 |
| % of column | 40.0 | 15.6 | 8.1 | 14.3 | | 9.1 | | | | 10.9 |
| Farming loss # | 0 | 11 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| % of column | | 10.1 | 21.5 | | | | | | | 12.1 |
| Business loss # | 1 | 27 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| % of column | 6.7 | 24.8 | 33.3 | | | | | | | 22.1 |
| Minimal Income # | 3 | 5 | 4 | 2 | 1 | 3 | 2 | 2 | 3 | 27 |
| % of column | 20.0 | 4.6 | 3.0 | 28.6 | 20 | 27.3 | 11.8 | 33.3 | 12 | 8.2 |
| Bureau of Indian Affairs | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| % of column | 6.7 | | | | | | | | | 0.3 |
| Applicant/Parent/ Separated/ Divorced & Supported by Spouse | 0 | 19 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 25 |
| % of column | | 17.4 | 4.4 | | | | | | | 7.6 |
| Incarcerated | 0 | 11 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| % of column | | 10.1 | 4.4 | | | | | | | 5.2 |

| | No NTI | | | NTI | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Source of Income | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | T |
| Illegal Income | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Others # | 1 | 7 | 11 | 0 | 0 | 1 | 3 | 0 | 2 | 25 |
| % of column | 6.7 | 6.4 | 8.1 | | | 9.1 | 17.6 | | 8 | 7.6 |
| Total # | 15 | 109 | 135 | 7 | 5 | 11 | 17 | 6 | 25 | 330 |
| % of total | 4.5 | 33.0 | 40.9 | 2.1 | 1.5 | 3.3 | 5.2 | 1.8 | 7.6 | 100.0 |

sources for another 8.2 percent were not identified (or there was no income) and, in the "other" category, sources could not be categorized or were not known.

Income from farming or business assets accounted for the support of the largest proportion of applicants overall (12.1 and 22.1 percent), respectively), but applicants with these assets were concentrated in the zero-AGI, zero-NTI typologies (typologies 2 and 3, primarily). For the most part, these applicants qualified as zero-income because the forms or businesses that they or their families owned suffered losses. Another important source of support for the famiies with zero total income was financial aid, which was particularly important for those zero-income applicants with household sizes of 1-2. In kind support from an estranged marriage partner was reported by zero income applicants with household sizes of 3 or more and by those with NTI of over $3,000 and household size greater than 5 (typology 9).

Because typologies 2 and 3 were the largest, they account for the largest proportions of most categories of support including: Department of Public Welfare, Veteran's Educational Benefits, and incarcerated applicants as well as those in "other" categories. Those reporting some non-taxable income were most likely to document their minimal incomes in some way but not identify the source, be supported by public welfare, or receive income from Social Services. Those in higher typologies (with some NTI) accounted for the largest proportion of those reporting income from a Department of Social Services; over 40 percent of those with support from the Department of Public Welfare; and over 60 percent of those with minimal income documented acceptably. Social Services and Public Welfare payments included primarily Social Security, and aid to families with dependent children. A small number of the applicants in these categories listed food stamps and unemployment benefits as part of their support.

## 5.9: CHAPTER SUMMARY

The major findings from studying the 1977-78 BARC validation applicants are summarized below:

- Zero and low-income applicants had smaller household size and fewer enrollees from the household enrolled in post-secondary education.
- Those with incomes of $1,000 or less were most likely to confirm fields rather than submit corrections, or to fail to respond to the validation request. As income increases, changes were made to AGI more frequently than to NTI.
- Among respondents to the validation, the vast majority tended to make corrections rather than simply reply confirming the information they originally supplied on their SERs. Those with household sizes of 1-4 were more likely to confirm all fields than were those with larger household size; they were also more likely to submit acceptable responses.
- The changes made as a result of validation request varied by the type of corrections made. The average absolute change to Eligibility Index for the validation respondents as a whole was 437 points, and the average effective EI changes was 237 points. One-fifth of those with EI changes became ineligible.
- The largest EI change occurred for applicants in the $1-$3,000 range (335 points). The average effective EI change for zero- and negative income applicants by contrast was 111 points.
- The $1-$3,000 income group was most likely to change the level of AGI initially reported. The zero or less income group, by contrast, was likeliest to change NTI, but much less likely to change AGI than other income groups.
- Very few applicants became ineligible as a result of making changes to NTI if they did not also correct AGI, while 28.3 percent of those who changed AGI became ineligible.
- Increases of more than 50 points to the SEI occurred for 32 percent of respondents to the validation process. The proportion of such changes increased for incomes over $6,000.
- The negative, zero and $3,000-$6,000 income range consistently had the least numbers and smallest changes to AGI, SEI and NTI of any income groups.
- The AGI discrepancies caused the distribution of applicants in the income categories used for analysis to change considerably, especially for those in the $1-$3,000 category, many of whom increased their AGI to $6,000 or more. The zero/negative income group was most likely to remain the same.

- An analysis of sources of income for a small sample (304) of validation respondents gave some clues to sources of income for zero-AGI applicants. Those with no AGI or NTI reported accounted for almost three fourths of the sample. These individuals were most likely to report income from financial aid, farming or business assets, support from a spouse if separated, divorced or widowed, or report being incarcerated. Those with some NTI are most frequently receiving assistance form Social Services, Public Welfare or Vetern's educational benefits. Government-sponsored support accounted for 31.9 percent of the cases and 10.9 percent reported receiving financial aid.

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